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CONSUMPTION OF FOOD BY
FARM HOUSEHOLDS (IN)
PRINCE EDWARD ISLAND

1945-1946

C. I. JOHNSTON & L. E. DRAYTON



Canada

DEPARTMENT OF AGRICULTURE

Marketing Service

Economics Division

Ottawa, March, 1953

Erratum:

The columns appearing in the second half of the last page of table 22 starting with "Tomatoes and Citrus Fruit" should properly have appeared between "Pulses" and "Other Vegetables" on the preceding page.

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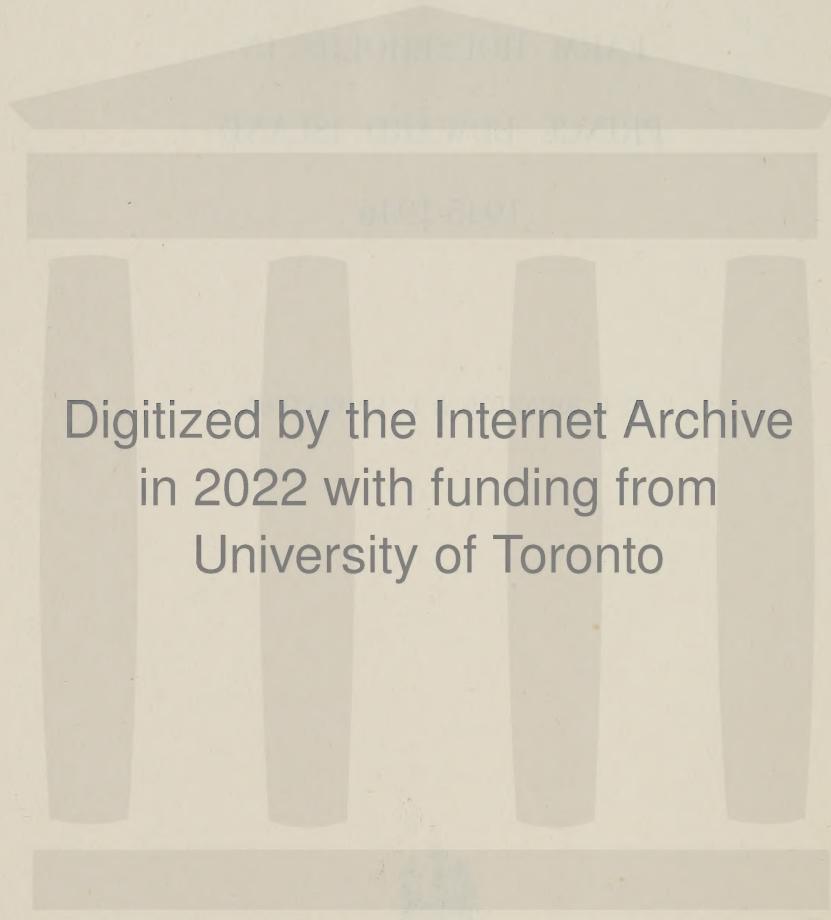
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FOREWORD

This is one of three studies of food consumption by farm households in the provinces of Prince Edward Island, Nova Scotia and New Brunswick. It was conducted by the Economics Division, Canada Department of Agriculture and the Nutrition Division, Department of National Health and Welfare in co-operation with the Departments of Agriculture and Health in each of the three provinces.

The sample was designed with the guidance of the Dominion Bureau of Statistics, and personnel of the co-operating agencies carried out the field work. The technical advice received from many members of the staff of other divisions of both the Canadian and Prince Edward Island Governments is gratefully acknowledged.

To the co-operating farm families, and particularly to those who completed questionnaires sent by mail, special thanks are extended.

CONSUMPTION OF FOOD BY FARM HOUSEHOLDS, PRINCE EDWARD ISLAND, 1945-46

INTRODUCTION

Reasons for the Survey.— Canada's production of many classes of food is sufficient to meet her own needs and provide surpluses for export. As compared with that of most other nations the level of food consumption in Canada is high. However, the degree to which the food consumed is evenly distributed throughout the population has not been known.

The Canadian Council on Nutrition, the nutritional advisory body to the Minister of National Health and Welfare, recognized that such information was needed for Canada, and for some years urged that data relating to the diets of farm families be obtained. The Economics Division of the Department of Agriculture and the Nutrition Division of the Department of National Health and Welfare therefore initiated a survey of consumption of food on farms in the Maritime Provinces in 1945. This report deals with the Prince Edward Island section of the study.

The survey was undertaken with the following aims:

- (a) To measure as well as possible with the means available, the adequacy of the diets of the farm households in general and of particular groups among them;
- (b) To ascertain the extent to which farm households supplied their own food.

Survey Conditions.— The economic position of the farmers of Prince Edward Island was perhaps better in 1945 and 1946 than at any other time during the period 1940 to 1950 with the exception of 1948. Although net farm income was higher in 1949 and 1950 than in 1946 by about 25 per cent, farm living costs had risen by approximately 40 per cent. The consumption of purchased foods may therefore have been higher in the survey years than in most years of the decade. On the other hand, butter, meat and sugar and preserves were rationed during the survey periods and the consumption of those products, to the extent that they were bought, may have been lower than in a period of free purchase.

Method.— Two survey areas were objectively selected, one in the eastern and one in the western half of the province, and sub-areas were systematically chosen from the census list of farmers. The farms included in the survey were, however, only those from which the agricultural products sold provided at least half of the cash income of the family in 1944. On the whole, those farms were larger and their families were probably more prosperous than the average of those enumerated in the census. The average size of survey farm was 127 acres whereas that of the 1941 census farms was 96 acres. Approximately half of the survey farms, but only one-third of those listed in the census, exceeded 100 acres in area.

In October 1945, reports were obtained by interview from 93 farm households.^{1/} These reports included information for classifying the farm and family, and the quantity, source and retail value of each kind of food which had been consumed by the household during the preceding week were ascertained from the housewife by checking a comprehensive list of foods. Prices of food were obtained from local retail stores to supplement and verify the prices stated. Data were obtained concerning the number of meals eaten during the week and the age, sex and occupation of the persons eating them. In addition, certain questions were asked regarding the food habits of each member of the family.^{2/}

To obtain the food consumption data for the long winter period, questionnaires were mailed to the families previously visited. Reports covering weeks in February, March and half of April were returned from 39 households. To secure more adequate representation of the survey families for the winter-spring period, 29 families who had not reported for the winter were interviewed during the latter part of May.^{3/} All the farms were again visited in the summer when 89 reports were obtained, of which all but two referred to weeks in the period from July 22 to August 4.

The three seasons of survey have been assumed, in view of climate conditions which affect supplies of food and occupation as well as temperature, to represent the following parts of the year: October, 4 months; February-May, 5 months; July-August, 3 months. Consequently, to obtain average figures the weights 4, 5 and 3 have been applied to the data for the first, second, and third periods, respectively.

QUANTITY OF FOOD CONSUMED

It was possible to compare the quantities of food found to have been consumed on the Prince Edward Island farms with Canadian civilian supplies per person for the crop year ended June 30, 1946, a period almost coinciding with the survey year. The Canadian figures used "represent available supplies including production and imports, adjusted for change of stocks, exports, marketing losses and industrial uses".^{4/}

^{1/} In October 1945 the field work was supervised by Mrs. Flora Webster Shefrin.

^{2/} Here "family" refers only to the members of the household who were related but as most households contained only related members, "family" and "household" are used without distinction elsewhere in this report.

^{3/} In May 1946 the field work was supervised by Miss Rachel Berthiaume.

^{4/} Department of Trade and Commerce. Dominion Bureau of Statistics.
The Canada Year Book 1947. Ottawa, 1947. pp. 776-778.

The foods reported in the survey were classified into 14 main groups and converted to the forms below, which are those in which the Canadian supplies are stated:
1/

1. Dairy products excluding butter (milk solids);
2. Meats (carcass weight);
3. Poultry, game and fish (edible weight);
4. Eggs (retail weight);
5. Fats and oils (fat content);
6. Sugars and syrups (sugar content);
7. Potatoes (retail weight);
8. Pulses 2/ and nuts(shelled retail weight);
9. Tomatoes and citrus fruits (fresh equivalent retail weight);
10. Fruit other than citrus (fresh equivalent retail weight);
11. Leafy, green and yellow vegetables 2/ (fresh equivalent retail weight);
12. Other vegetables 2/ (fresh equivalent retail weight);
13. Grain products (retail weight);
14. Beverages: tea (retail weight); coffee (green beans); cocoa and chocolate (whole beans).

An additional group included baking accessories, flavourings, seasonings, jelly powders, and a few food mixtures composed of various ingredients not present in large enough quantity to warrant the labour of allocation to the main groups.

1/ Conversion factors were obtained for the following foods from the sources named:

(a) Dairy products except ice cream, poultry, game, fats and oils except very fat salt pork, honey, syrups, canned tomatoes, tomato juice, canned fruits and fruit juices, and canned vegetables: Food Consumption Levels in the United States, Canada and the United Kingdom. Third Report of a Special Joint Committee set up by the Combined Food Board. Production and Marketing Administration, U.S.D.A. Washington, 1946.

(b) Meats, except beef sausage, sugars in many manufactured foods, nuts except peanuts, grain products and beverages: Conversion Factors and Weights and Measures for Agricultural Commodities and Their Products. Section A - Conversion Factors. Office of Distribution. United States War Food Administration. Washington, D.C.

(c) Other foods, Canadian Government Departments.

2/ The two main classes of vegetables, "leafy, green, and yellow" and "other" are roughly separated on the basis of their pro-vitamin A content. In this report the former class, providing most vitamin A, includes: asparagus, green beans, beet tops, broccoli, Brussels sprouts, cabbage, carrots, Chinese cabbage, green celery, wild greens, kale, lettuce, parsley, green peas, peppers, pumpkin, sauerkraut, spinach, yellow squash, and Swiss chard. "Other" vegetables include some which are green or yellow in appearance, e.g., corn, cucumbers and turnips. Dried peas and beans, because they are pulses, are excluded from the above groups.

Dairy Products (Excluding Butter). - Milk solids from all dairy products except butter were consumed at the rate of 1.6 pounds per person per week on the Prince Edward Island farms of the survey, exceeding the reported Canadian consumption by one-sixth (Table 1) (Figure 1).

a/

Table 1.- Weights of Foods Consumed per Person per Week, by Season, Prince Edward Island Farm Households, 1945-46, and Average b/Weights Consumed Compared with Supplies Available to Civilians in Canada, Year Ending June 30, 1946 c/

Foods	Prince Edward Island			Canada		
			Average			Year
	February-July-October; May, 1945		Pounds per Person per Week	Percentage of Canadian Consumption		June 30, 1946
	1945	1946	1946	Week	of Canadian Consumption	1946
			- pounds -		- per cent -	- pounds -
DAIRY PRODUCTS						
(Excluding Butter) d/	1.65	1.47	1.78	1.60	117	1.37
Fluid whole milk	8.74	7.79	9.90	8.63	-	9.16 e/
Fluid cream	1.01	.75	1.11	.93	-	-
Skim and buttermilk	.84	1.13	.29	.82	-	-
Canned whole milk	.03	.18	.06	.10	37	.27
Cheese	.18	.12	.16	.15	125	.12
MEATS f/	2.17	2.01	1.83	2.02	77	2.62
Beef f/	1.57	1.12	1.37	1.33	106	1.25
Veal f/	.00	.00	.02	.01	4	.26
Lamb and mutton f/	.15	.00	.01	.05	62	.08
Pork (excluding lard) f/	.41	.85	.40	.59	64	.92
Offal g/	.04	.04	.03	.04	36	.11
POULTRY, GAME, AND FISH g/	.65	.71	.61	.66	129	.51
Poultry h/	.50	.26	.39	.37	77	.48
Game h/	.06	.00	.00	.02	25	.08 i/
Fish g/	.36	.59	.43	.47	276	.17

a/ Retail weight except where otherwise stated.

b/ Seasonal weights per person per week weighted as follows: fall, 4; winter-spring, 5; summer (July 22 - August 4), 3.

c/ Department of Trade and Commerce. Dominion Bureau of Statistics. The Canada Year Book 1947. pp. 776-778. Ottawa, 1947.

d/ Milk solids.

e/ Including whole milk equivalent of fluid cream and that used in ice cream.

f/ Carcass weight. Edible weight of offal included in "Meats".

g/ Edible weight. Filleted weight of fish. Fresh filleted weight of fish in farm weights.

h/ Dressed, not drawn.

i/ Estimated by Department of Mines and Resources.

a/

Table 1.- Weights of Foods Consumed per Person per Week, by Season, Prince Edward Island Farm Households, 1945-46, and Average b/Weights Consumed Compared with Supplies Available to Civilians in Canada, Year Ending June 30, 1946 c/- Continued

Foods	Prince Edward Island				Canada	
			Average		Year	
	February- October: 1945		July- May: 1946		Pounds per August: 1946	Percentage Person per: Week
					Ended of Canadian: June 30, 1946	
- pounds -				- per cent -		pounds -
EGGS	.83	.90	.86	.86	134	.64
FATS AND OILS j/	.66	.65	.67	.66	102	.65
Butter	.61	.48	.58	.55	117	.47
SUGARS AND SYRUPS k/	1.06	1.20	1.08	1.12	76	1.48
Sugars l/	.49	.52	.57	.52	-	*
Molasses	.58	.82	.52	.66	-	-
Jam, Jelly, and marmalade	.24	.13	.21	.19	-	-
POTATOES	7.54	6.72	5.70	6.74	179	3.76
PULSES AND NUTS m/	.21	.26	.16	.22	96	.23
Pulses	.16	.20	.12	.17	106	.16
TOMATOES AND CITRUS						
FRUIT n/	1.09	1.54	1.14	1.29	71	1.82
Tomatoes n/	.56	.71	.31	.56	64	.88
Fresh citrus	.51	.77	.65	.66	74	.89
n/						
FRUIT OTHER THAN CITRUS	4.12	2.81	2.26	3.11	168	1.85
Fresh, total	2.97	.90	1.11	1.64	161	1.02
Apples	2.76	.71	.05	1.23	-	-
Other	.21	.19	1.06	.41	-	-
Canned o/	.10	.27	.14	.18	-	.07 p/
Dried	.22	.44	.22	.31	163	.19
LEAFY GREEN, and YELLOW VEGETABLES n/						
Fresh	2.72	1.36	1.37	1.82	198	.92
	2.53	1.05	.99	1.53	215	.71

j/ Fat content.

k/ Sugar content.

l/ Purchased as sugar, excluding amounts in foods taken from storage.

m/ Shelled weight of nuts.

n/ Fresh equivalent weight. Fruit in jam, jelly, and marmalade included in "Fruit Other than Citrus" or in "Citrus Fruit".

o/ Farm weights include small quantities of canned and bottled juice.

p/ Commercial only.

- Continued

a/

Table 1.- Weights of Foods Consumed per Person per Week, by Season, Prince Edward Island Farm Households, 1945-46, and Average b/Weights Consumed Compared with Supplies Available to Civilians in Canada, Year Ending June 30, 1946 c/- Continued

Foods	Prince Edward Island				Canada	
			Average		Year	
	February	July	Pounds per Person per Week	Percentage of Canadian Consumption	Ended June 30, 1946	
	October 1945	May 1946	August 1946	Person per Week	Canadian June 30, Consumption 1946	
- pounds -				- per cent -		pounds -
OTHER VEGETABLES n/	3.64	2.64	.70	2.49	274	.91
Canned vegetables q/	.08	.34	.39	.26	-	.28 p/
Pickles q/	.24	.09	.10	.14	-	-
GRAIN PRODUCTS	5.01	5.04	5.01	5.03	139	3.63
Flours r/	4.39	4.30	4.57	4.40	139	3.16
Bought bread	.20	.25	.17	.22	-	-
Cereals to cook	.51	.60	.28	.49	-	-
Cereals prepared	.11	.14	.16	.14	-	-
Cereals refined s/	.23	.23	.18	.22	-	-
Cereals whole grain s/	.39	.51	.26	.41	-	-
BEVERAGES t/	.16	.18	.15	.16	59	.27
Tea and coffee	.11	.11	.10	.11	65	.17
MISCELLANEOUS u/	.26	.28	.26	.27	-	-
CANNED SOUPS v/	.13	.13	.13	.13	-	-
NUMBER OF HOUSEHOLDS	93	68	89	-	-	-

q/ Both classes of vegetables are included in the total weights of the two classes. In farm weights pickled beets are included in canned vegetables and excluded from pickles.

r/ Including flour in purchased bakery products.

s/ Included in "Cereals to Cook" and "Cereals Prepared".

"Refined": providing less than 0.4 mg. thiamine per 1,000 calories.

"Whole Grain": providing at least 0.4 mg. thiamine per 1,000 calories.

t/ Tea, retail weight; coffee, green beans; cocoa, including chocolate, whole beans.

u/ Foods which, and those of which the principal ingredients, are not included elsewhere.

v/ Not included in "Miscellaneous", but only tomatoes of tomato soup included elsewhere.

Figure 1.- Milk Solids Consumed per Person per Week

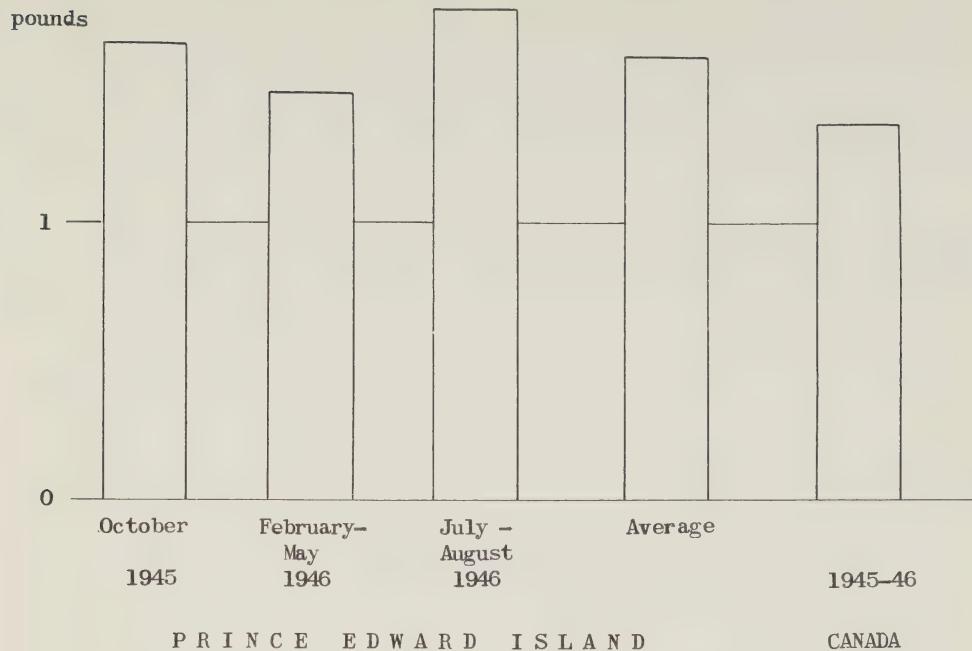


Figure 2.- Edible Meat, Poultry, Game and Fish Consumed per Person per Week
pounds



The intake of milk solids rose by roughly 20 per cent from the winter-spring to the summer period. In the latter season, supplies of whole milk and cream were naturally much greater. Skim milk and buttermilk apparently were used on some farms in the winter-spring period to supplement the short supply of whole milk and cream. Greater use was also made of canned milk in that season, although even then only 15 per cent of the households reported using it during the week of survey.

The milk solids obtained were provided by the various dairy products in the following proportions: whole milk, 67 per cent; cream, 20 per cent; skim milk and buttermilk, five per cent; cheese, six per cent; other manufactured milk products, two per cent.

Cheese consumption compared favourably with that of Canada. In each season some cheese was eaten by approximately 60 to 70 per cent of the households during the survey week.

Meats.— The rate of meat consumption on the Prince Edward Island farms was approximately three-quarters of that of Canada. Poultry, game and fish are used alternatively with meat, so that a comparison of combined weights is useful. The boneless weight of the meat consumed was computed in order to arrive at the sum of the edible weights of poultry, game, fish and meat. This amounted to 2.2 pounds per person for the survey households and was nearly 90 per cent of the corresponding consumption in Canada (Figure 2).

More meat per person was reported in October than in the other seasons, since beef consumption was highest at that time and lamb was eaten by a few families in the fall. Nevertheless, the boneless meat plus edible weight of poultry, game and fish eaten per person in the fall was approximately equal to that of the winter when the consumption of pork (which yields more boneless meat relative to carcass weight than does beef) was high.

The consumption of beef was slightly higher on the Prince Edward Island farms than the average for all Canada, but veal consumption (reported by only one household during the survey week) was negligible when compared with 0.26 pounds consumed per person per week throughout Canada; pork consumption was only 64 per cent of that of Canada and the amount eaten of lamb and mutton was even smaller than the Canadian average of 0.08 pounds per person per week. Very little offal, 0.04 pounds per person per week or about a third of the Canadian consumption, was eaten on the farms.

Of the retail weight of the beef consumed, excluding canned beef, steaks comprised 14 per cent, oven roasts, principally sirloin, loin and rib, made up 24 per cent and round and rump cuts, which might be used as oven roasts made up 21 per cent. The cheaper cuts, pot roasts, stewing beef, soup beef and hamburger, averaging 35 per cent, constituted a smaller proportion of the beef consumed in the summer than in the cooler seasons. Corned beef amounted on the average to six per cent of the retail weight excluding canned beef.

Cured as well as fresh pork was used most extensively in the winter-spring period. In that season about half of the cured pork consumed was "salt" pork.

Poultry Game and Fish. - The edible weight of these foods combined was higher on the farms than in Canada as a whole because the fish consumption was much greater. The average consumption of poultry was considerably less than that of Canada. No reports were obtained at the Christmas season and it is estimated that about 85 per cent of the Canadian consumption of turkey, goose and duck (amounting to nearly 0.06 pounds per person per week for 1945-46, retail weight) takes place at that time. The reports showed little seasonal variation in combined poultry, game and fish consumption. Nevertheless, only a little over half as much poultry was used in the winter-spring period as in the fall. Game was eaten by the survey families only in the fall and even then in very small amount. Fresh fish was consumed in greatest quantity in the summer, although the large amounts eaten in May raised the consumption for the winter-spring period. Consumption of cured fish was high in the latter season.

Eggs. - Even in the fall, the season when eggs were least plentiful on the farms, the consumption of eggs was 30 per cent above the Canadian figure. The indicated seasonal variation in egg consumption is small but the true variation may be somewhat greater because the survey periods probably did not coincide with the periods of highest and lowest consumption.

Fats and Oils. - The quantity of fat derived from butter, lard and shortening was remarkably uniform from season to season and close to that obtained on the average by all Canadians. The reduction in the butter ration in March and April appears to have been the reason for lower consumption in the winter, as consumption of home produced butter was maintained at about the level of that of the other seasons.

Sugars and Syrups. - The sugar obtained per person on the farms from the sugars and syrups consumed was only three-quarters of the Canadian per person supply. Nearly 40 per cent of the latter went into manufactured foods and beverages of which the farm families bought relatively little, and their purchases of sugar for home baking and of syrups were limited to the ration. Molasses, which was used in large quantity, about one cup per person per week, provided more than one-third of the sugar obtained from sugars and syrups. The particularly high consumption of molasses in the winter-spring season accounted for the increase in the sugar intake in that period.

Potatoes. - It is not surprising that the consumption of potatoes, one of the major Prince Edward Island farm products, was found to be much greater, approximately 80 per cent, on those farms than in Canada as a whole (Figure 3). The particularly large consumption in October may have resulted in part from the heavy work of potato harvesting during that month. Quantities larger than necessary may have been cooked when the supply was abundant, and waste was not recorded. The summer survey period was the beginning of August when low consumption might be expected since the previous year's stock was no doubt low and new potatoes were not quite ready for use. Only nine per cent of the potatoes used in the summer period were from the new crop.

Pulses and Nuts. - Grouping pulses and nuts together, approximately equal quantities per person were eaten on the farms and in Canada as a whole. The consumption of pulses rose in the winter and fell in the summer, since they are used principally in cold weather dishes such as baked beans and soups.

Figure 3.- Potatoes Consumed per Person per Week

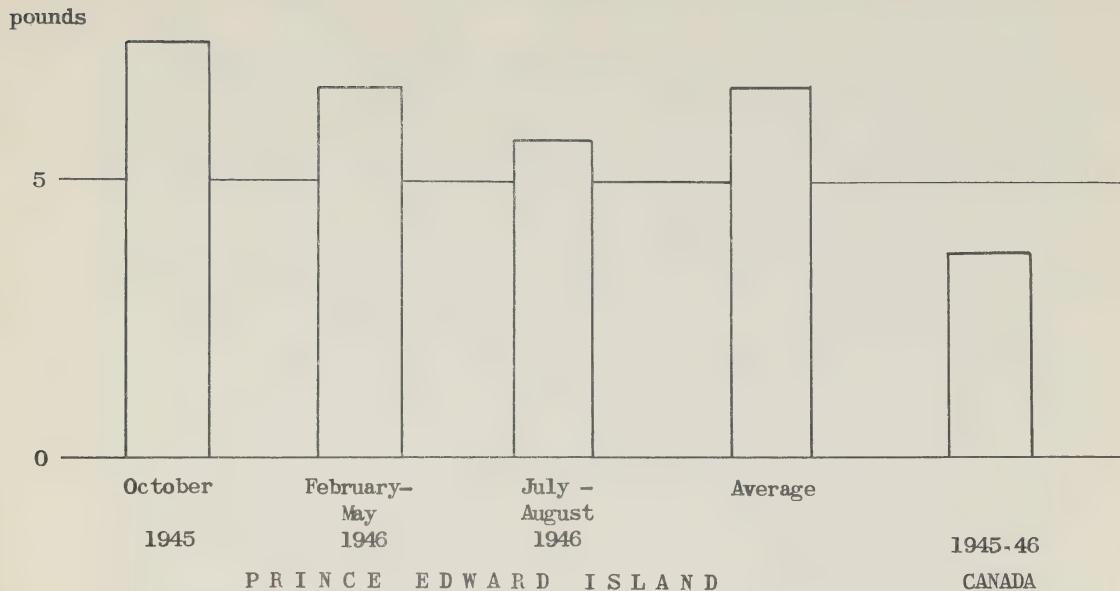
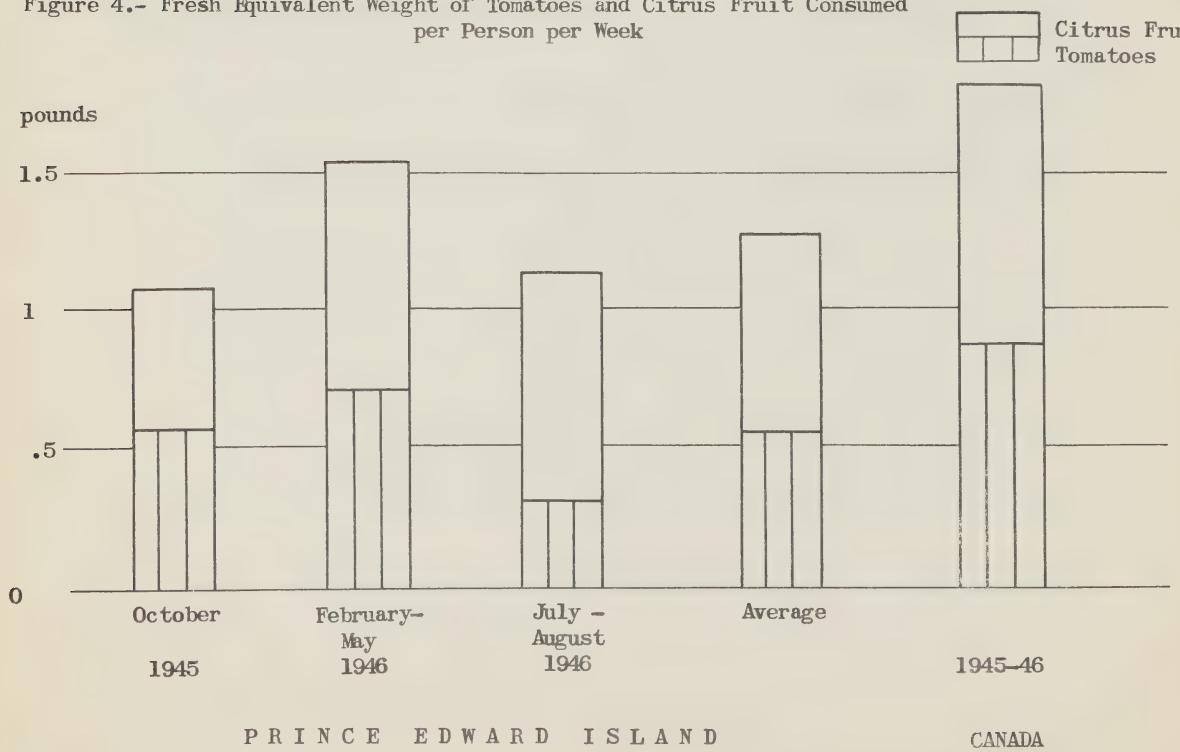


Figure 4.- Fresh Equivalent Weight of Tomatoes and Citrus Fruit Consumed per Person per Week



Tomatoes and Citrus Fruit.— As a source of ascorbic acid this food group demands particular attention. The farm consumption of tomatoes and citrus fruit combined was the lowest as a percentage of Canadian consumption, of all the food groups. The quantity eaten per person of fresh citrus fruit was about three-quarters of that consumed in Canada and the computed average consumption of tomatoes (fresh equivalent weight) was less than two-thirds of the amount consumed per person in Canada (Figure 4). It is true that the survey did not cover the height of the tomato season, late August and September, but home produced fresh tomatoes were being eaten in October and since the October consumption was assumed to be representative of four months some compensation was thus made for the lack of reports in late August and September. Nutritionists advise the use of 1.5 pounds of tomatoes and citrus fruit per person (of at least seven years of age) per week where those foods are the chief sources of ascorbic acid.^{1/} Since the average quantity of tomatoes and citrus fruit eaten per person on the Prince Edward Island farms amounted to only 87 per cent of the quantity suggested above, it is likely that the intake by many was considerably lower. The farm people of course received additional ascorbic acid from potatoes, unless most of it was lost in preparation and cooking, since their consumption of potatoes was much greater than the recommended 4.5 pounds per week for a moderately active man. Considering the three survey seasons, the largest amount of ascorbic acid derived from potatoes was obtained in the fall since their consumption was highest in that season and new potatoes have a higher ascorbic acid content than have those which are stored. Both canned tomatoes and fresh citrus fruit were eaten in greatest quantity per person in the winter-spring seasons. However, at the time when tomato consumption was particularly low, ascorbic acid was added to the diets from raspberries and strawberries.

Fruit Other than Citrus.— The farm households obtained about one and two-thirds the quantity of this class of fruit that was consumed per person in Canada. Fresh apples made up a particularly large part of the farm fruit in the fall. Dried fruit calculated in terms of its fresh equivalent weight, amounted to half the fresh equivalent weight of the fruit eaten in the winter-spring. The sources of the fresh equivalent weight of the fruit eaten in each season were as indicated in Figure 5.

The kinds of fresh fruit eaten varied as might be expected from season to season. In the summer changes take place over a few weeks and the proportions presented in Table 2 apply only to the short survey period near the end of July and the beginning of August.

In the winter-spring months when fresh fruit was scarce the quantity of canned fruit eaten per person was twice that of the other seasons. In the former period 54 per cent, but in the fall only 19 per cent, and in the summer 29 per cent of the households reported using some canned fruit during the survey week.

^{1/} Department of National Health and Welfare. Nutrition Division, Healthful Eating. p. 24. Ottawa, 1952.

Table 2.- Percentage Distribution of Fresh Fruit Other than Citrus by Kind,
by Season, Prince Edward Island Farm Households, 1945-46

Kind	October, 1945	February-May, 1946	July-August a/ 1946
- per cent -			
Apples	93	79	4
Bananas	2	14	11
Blueberries	0	0	17
Cherries	0	0	10
Raspberries	0	0	27
Strawberries	0	0	25
Other	5	7	6
Total	100	100	100
- pounds -			
Weight consumed per person per week	2.97	.90	1.11

a/ July 22 to August 4.

Leafy, Green, and Yellow Vegetables.— The average consumption of such vegetables on the Prince Edward Island farms was twice that of Canada. Very high consumption was reported in the fall when carrots and cabbage were abundant (Table 3). In the winter-spring months the quantity eaten per person was only half that of the fall and even at the end of July it was similarly low, as development of peas and beans is slow in the province.

Table 3.- Percentage Distribution of Fresh Leafy, Green, and Yellow Vegetables by Kind, by Season, Prince Edward Island Farm Households, 1945-46

Kind	October, 1945	February-May, 1946	July-August a/ 1946
- per cent -			
Beans	1	0	13
Cabbage	17	24	5
Carrots	79	74	12
Greens	0	0	29
Lettuce	0	1	20
Peas	0	0	21
Other	3	1	0
Total	100	100	100
- pounds -			
Weight consumed per person per week	2.53	1.05	.99

a/ July 22 to August 4.

Figure 5.- Fresh Equivalent Weight of Fruit Other than Citrus Consumed per Person per Week

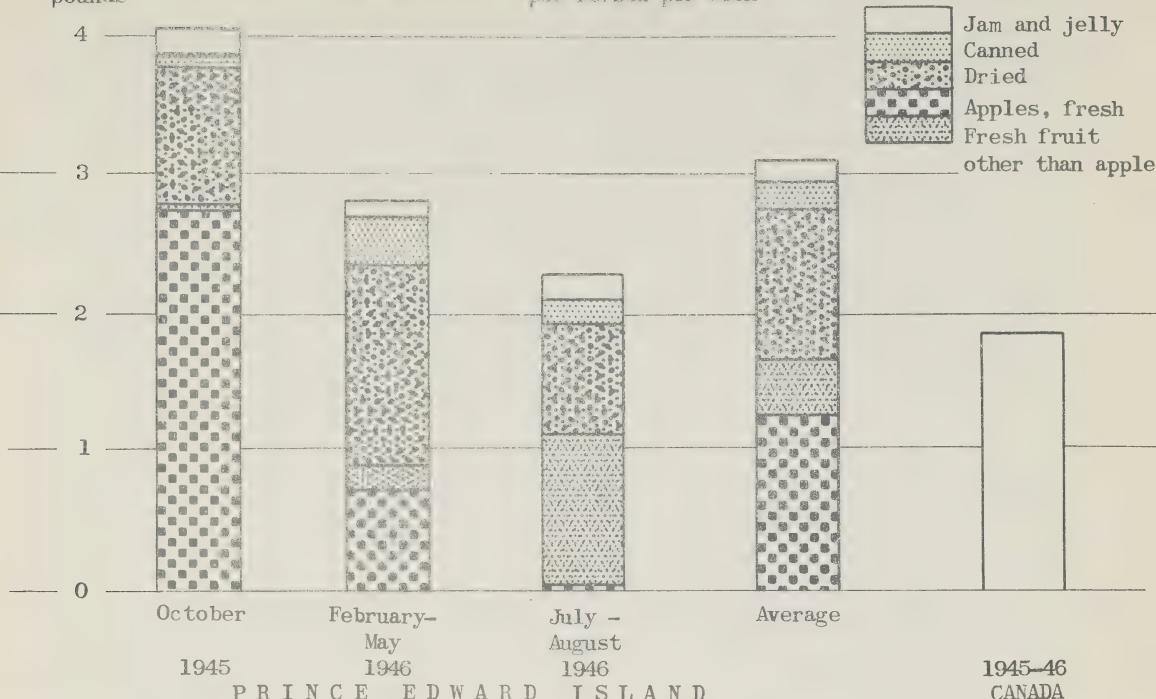
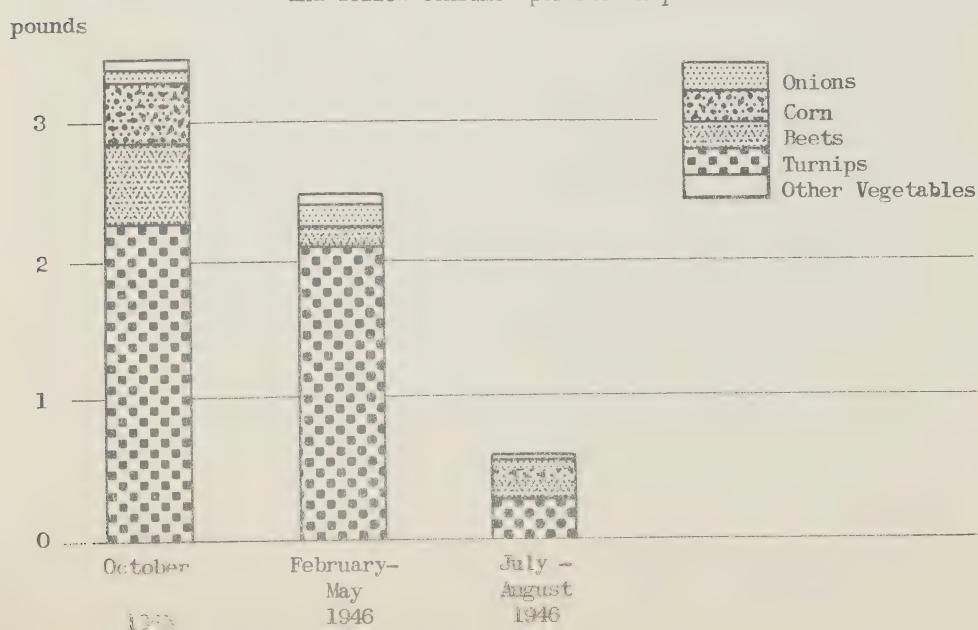


Figure 6.- Fresh Equivalent Weight of Vegetables Other than Leafy, Green, and Yellow Consumed per Person per Week



A considerable proportion of the ascorbic acid content of the cabbage used may have been lost in cooking. Only 18 per cent of the housewives customarily cooked cabbage as short a time as 15 minutes and 50 per cent cooked it 30 minutes or longer. However, two-thirds of the latter said that the water in which vegetables were cooked was generally used in soups, gravies, and stews.

Vegetables Other than Leafy, Green, and Yellow.— The consumption of vegetables of this class on the farms averaged two and two-thirds times that by all Canadians, but the variation from season to season was very wide. Turnips, grown commercially in Prince Edward Island, were eaten at the rate of more than two pounds per person per week in both the fall and winter-spring seasons (Figure 6). In the fall, beets and corn were also available in considerable quantity. The consumption of this class of vegetables at the end of July was very light since young beets and turnips were only coming into use and corn was not yet ready.

The consumption of canned vegetables, both home canned and purchased, was a little less than the amount consumed per person in Canada of commercially canned vegetables only. Greater quantities were eaten in the summer and winter-spring survey periods when the fresh vegetable supplies were lowest.

Grain Products.— The consumption of cereal products, both as flour and in other forms, was approximately 40 per cent higher on the farms than in Canada as a whole. Since the sugar obtained per person from sugars and syrups was relatively low, more grain products may have been needed to provide the required calories in the diet.

Almost all (97 per cent) of the flour used was white.

Purchased bread was used during the survey week in the fall by 16 per cent of the households, in the winter-spring by 25 per cent, and in the summer by 27 per cent. On the average, 17 per cent of the bread which was bought was "brown". Soda crackers were popular and an average of 0.12 pounds per person per week was eaten.

The consumption of whole grain 1/ cooking cereals, of which rolled oats and oatmeal made up at least 90 per cent in each season, averaged 0.35 pounds per person per week. In the winter-spring period the quantity eaten per person of such cereals was two and one-third times that of the summer, and since they were a major part of both cooking and of whole grain cereals the consumption rates of each of these cereal groups were in the winter-spring about double that of the summer.

Beverages.— A strong preference for tea over coffee was shown. On the farms three-quarters of the retail weight of the tea and coffee used was tea, whereas in Canada as a whole the corresponding proportion was about 45 per cent.

1/ Whole grain cereals were defined as those containing at least 0.4 mg. thiamine per 1,000 calories.

CALORIE AND PROTEIN VALUES OF THE FOOD CONSUMED

Diets may be evaluated by means of reducing the many foods consumed to their common nutrient values. The amounts of the nutrients provided per person may then be compared with the amounts obtained by other groups whose diets have been similarly evaluated. Comparisons may also be made of the nutrients supplied with those required.

Only the calorie and protein values of the food consumed by the Prince Edward Island farm households were calculated.^{1/} These values were available for nearly all foods eaten in Canada, and they were applicable to the foods as listed in the survey schedule. On the other hand, the determination of the mineral and vitamin content of the food consumed was precluded by a lack of knowledge of those values for many foods or by the wide variations in the values of the same foods under different conditions of production, maturity, storage, preparation, and cooking.

Calories, measuring the energy provided by the carbohydrate, fat, and protein, indicate the quantity of the food obtained. Protein, important for building and repairing the body, is frequently associated with minerals and vitamins and signifies to some extent the quality of the food.

Quantity and Adequacy of Calories. - Compared with the 3,055 calories per person per day provided by the food apparently consumed by all Canadian civilians in 1945 ^{2/}, an average ^{3/} of 3,520 calories per person per day was computed to have been supplied by the food on the survey farms.

When the requirements of the individuals consuming the food were calculated as nearly as possible on the basis of their age, sex and activity,^{4/} and adjustments ^{5/} were made for losses in calories in household waste and for inequitable distribution of food, the calories supplied were found to average 107 per cent of the amount required.

Sources of Calories. - Of all the food groups, grain products contributed by far the largest proportion of the calories, 33 per cent (Table 4). In Canada in 1945, grain products provided 29 per cent of the calories. In the farm diets dairy products were the next greatest sources of calories; meat, poultry, game, and fish together supplied as large a proportion as fats and

^{1/} From tables supplied by the Nutrition Division, Department of National Health and Welfare. Calorie values were those revised in accordance with the recommendations of the Committee on Calorie Conversion Factors and Food Composition Tables of the Food and Agriculture Organization of the United Nations.

^{2/} Department of National Health and Welfare. Nutrition Division. Canadian Food and Nutrition Statistics 1935 to 1945. p. 6. Ottawa, 1946.

^{3/} Weighted seasonal data.

^{4/} Department of National Health and Welfare. Nutrition Division. Canadian Nutrition Notes. Ottawa, September, 1949.

^{5/} Same as footnote ^{1/}.

oils; potatoes, and sugars and syrups followed. On the farms, dairy products and potatoes contributed greater proportions, but meat, poultry, game, and fish, fats and oils and sugars and syrups were the sources of smaller proportions, of the total calories than in Canada as a whole.

Table 4.- Percentage Distribution of Calories by Source, by Season, Prince Edward Island Farm Households, 1945-46, and Canada, 1945 a/

Source	Prince Edward Island					Canada 1945
	October, 1945		February-May, 1946		July-August, 1946	
	1945	1946	1946	b/		
					- per cent -	
Dairy products (excluding butter)						
Meat, poultry, and game	10	10	9	10	10	15
Fish	1	1	1	1)	
Eggs	2	2	2	2	2	
Fats and oils	11	11	12	11	14	
Sugars and syrups	7	9	8	8	13	
Potatoes	10	9	8	9	6	
Pulses and nuts	1	2	1	2	2	
Tomatoes and citrus fruit	1	1	1	1	1	
Fruit other than citrus	4	3	2	3	2	
Vegetables other than above	4	3	2	3	1	
Grain products	32	33	34	33	29	
Total	100	100	100	100	100	100

a/ Department of National Health and Welfare. Nutrition Division. Canadian Food and Nutrition Statistics 1935-1945. Ottawa, 1946.

b/ Number of calories per person weighted as follows: fall, 4; winter-spring, 5; summer (July 22-August 4), 3.

There was a marked rise in the percentage of calories supplied by dairy products from the winter-spring to the summer when the consumption of both milk and cream increased. Other changes from season to season were small.

Quantity and Adequacy of Protein.— The average 1/ daily amount of protein supplied by the food consumed on the Prince Edward Island farms, 116 grams per person, was higher than the 99 grams per person provided by the food of all Canadian civilians in 1945.2/

When the protein requirements 3/ of the individuals eating the food on the farms were computed and adjusted for inequitable distribution, 4/ the quantity

1/ Weighted seasonal data.

2/ Department of National Health and Welfare. Nutrition Division. Canadian Food and Nutrition Statistics 1935-1945. p. 6. Ottawa, 1946.

3/ Department of National Health and Welfare. Nutrition Division. Canadian Nutrition Notes. Ottawa, September, 1949.

4/ Same as footnote 1/ p. 12.

supplied by the food eaten was found to exceed by 60 per cent the amount estimated to be required.

Sources of Protein.—Grain products contributed 36 per cent of the protein of the farm food (Table 5). Dairy products and the meat, poultry, game, and fish group each supplied 22 per cent. Potatoes provided seven per cent and eggs six per cent. The distribution pattern was close to that of all Canadian food in 1945, except that on the Prince Edward Island farms a considerably smaller proportion of the protein was derived from meat, poultry, game, and fish and a higher percentage was obtained from potatoes. Thus, animal protein, which is of higher quality nutritionally than vegetable protein, constituted 50 per cent of the total on the farms and 56 per cent in Canada. Since total protein was obtained in so much greater quantity by the farm families of the survey than the amount estimated to be required, protein of animal origin was equivalent to 80 per cent of the total quantity required by nutrition standards.

Table 5.—Percentage Distribution of Protein by Source, by Season,
Prince Edward Island Farm Households, 1945-46, and Canada, 1945 a/

Source	Prince Edward Island					Canada 1945
	October, 1945		February-May, 1946	July-August, 1946	Average b/	
	%	%	%	%	%	
- per cent -						
Dairy products (excluding butter)	22	21	25	22	23	
Meat, poultry, and game	18	15	16	16	27)	
Fish	5	7	4	6)	
Eggs	5	6	6	6	6	
Potatoes	7	7	6	7	4	
Pulses and nuts	3	3	2	3	3	
Tomatoes and citrus fruit	0	1	0	0	1	
Fruit other than citrus	1	1	1	1	0	
Vegetables other than above	4	3	2	3	2	
Grain products	35	36	37	36	34	
Other	0	0	1	0	0	
Total	100	100	100	100	100	

a/ Department of National Health and Welfare. Nutrition Division. Canadian Food and Nutrition Statistics 1935-1945. Ottawa, 1946.

b/ Quantity of protein per person weighted as follows: fall, 4; winter-spring, 5; summer (July 22-August 4), 3.

Differences in the proportions of the protein supplied by the various food groups at different seasons were, in general, narrow. Dairy products, however, were the source of 25 per cent of the protein in the summer and of only 21 per cent in the winter-spring.

RETAIL VALUE OF THE FOOD CONSUMED

The food consumed by the Prince Edward Island farm households was found to be worth on the average \$3 41 per person per week at the current retail prices.^{1/}

The lowest value, \$3.24, was that of the winter-spring period. The reduction from the fall value of \$3.52 was due chiefly to lower consumption of cream, poultry, apples, and vegetables, on the other hand, more eggs were eaten in this period than in the fall but their retail value was lower.

The increase to \$3.52 in the summer was the result of changes in both consumption and price. Greater quantities of milk and cream were largely responsible for the nine cents per person increase in the value of dairy products. Higher egg prices, with even a little lower consumption, added over five cents, and the value of the butter, eaten in greater amount and worth more per pound, advanced almost as much. An increase of nearly 14 cents in the value of fruit other than citrus occurred chiefly because the price of the fresh berries of the summer was much higher than that of the principal fresh fruits consumed in the winter-spring period, apples and bananas. The fact that the quantity of dried fruit eaten was cut in half from winter-spring to summer had little effect on the total value of all fruit other than citrus as the dried fruit was low in price. The prices of the fresh leafy, green, and yellow vegetables eaten in the summer were higher per pound than the prices of the cabbage and carrots of the winter-spring and they added nine cents to the total value of the food. On the other hand, the value of the fish consumed per person decreased by more than five cents from winter-spring to summer and the consumption of non-leafy, green, and yellow vegetables declined so much that even at higher prices their value was lowered by five cents per person.

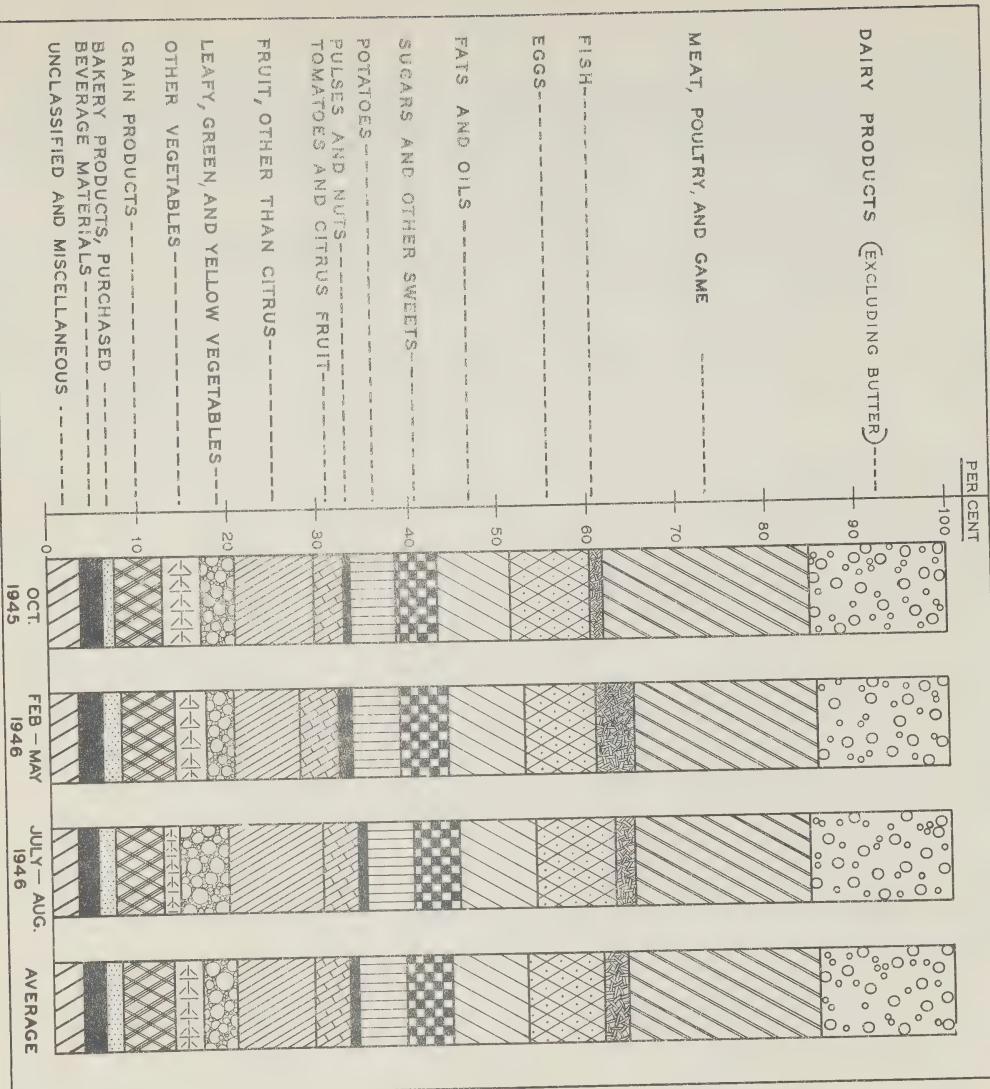
Distribution of Retail Value of Food.— Meat accounted for a larger portion of the retail value of the food consumed than did any other of the main food groups. Of the average dollar's worth of food the value of meat amounted to 17 cents (Table 6) (Figure 7). When poultry, game, fish, and eggs, the other animal foods used alternatively with meat, were added, 33 cents were accounted for. Dairy products, excluding butter, were responsible for 15 cents, and including butter for 22 cents. Thus, animal foods were the source of over half the retail value of all the food consumed.

. Vegetables, including potatoes, dried legumes and tomatoes were worth approximately 14 cents, and fruit contributed 11 cents, out of each dollar. Grain products, including purchased bakery items, accounted for seven cents.

The pattern of distribution varied little from season to season. In the summer the value of the meat, poultry, game, fish, and eggs was 30 per cent of the total, a little lower than in the cooler seasons. The greater quantity and higher value of the fresh fruit other than citrus and

1/ Prices of fluid milk, cream, and skim milk and buttermilk were estimated as those paid if purchased from neighbours.

FIGURE 7: DISTRIBUTION OF FOODS CONSUMED IN TERMS OF RETAIL VALUE



apples which was eaten in the summer increased the share of fruit, excluding citrus, in the food budget at that time. That the proportion of the food dollar devoted to leafy, green, and yellow vegetables was also higher in the summer was due only to the higher price of the kinds of vegetables eaten at that period.

Table 6.- Percentage Distribution of Foods Consumed, in Terms of Retail Value,
by Season, Prince Edward Island Farm Households, 1945-46

Foods	October, 1945	February-May 1946	July-August 1946	a/ Average
- per cent -				
DAIRY PRODUCTS (excluding butter)	15.3	14.5	15.9	15.2
MEAT b/	17.6	18.3	15.0	17.2
POULTRY AND GAME	5.8	2.9	4.1	4.2
FISH	1.6	4.1	2.3	2.8
EGGS	8.7	7.9	8.8	8.4
FATS b/ and OILS	8.3	8.5	8.6	8.5
SUGARS AND OTHER SWEETS	2.9	4.4	3.7	3.7
POTATOES	5.4	5.4	5.3	5.4
PULSES AND NUTS	.6	1.3	.7	.9
TOMATOES	1.4	1.1	1.2	1.2
CITRUS FRUIT	2.0	3.4	2.9	2.8
FRUIT OTHER than CITRUS	8.1	7.2	10.5	8.4
LEAFY, GREEN, and YELLOW VEGETABLES	3.9	3.0	5.5	3.9
OTHER VEGETABLES	4.4	3.4	1.7	3.3
GRAIN PRODUCTS	5.4	5.9	5.4	5.6

a/ Seasonal values per person per week weighted as follows: fall, 4; winter-spring, 5; summer, (July 22-August 4), 3.

b/ Very fat salt pork excluded from meat and included in fats.

Table 6.- Percentage Distribution of Foods Consumed, in Terms of Retail Value, by Season, Prince Edward Island Farm Households, 1945-46 - Continued

Foods	October, 1945	February-May, 1946	July-August, 1946	a/ Average
- per cent -				
BAKERY PRODUCTS, PURCHASED	1.3	2.1	1.8	1.7
BEVERAGE MATERIALS	2.4	2.7	2.2	2.5
UNCLASSIFIED and MISCELLANEOUS c/	4.9	3.9	4.4	4.3
	100.0	100.0	100.0	100.0
- dollars -				
Retail Value of Food per Person per Week	3.52	3.24	3.52	3.41

c/ Jam, jelly, marmalade, pickles, mincemeat, canned soups, packaged desserts, flavourings, seasonings, and cooking accessories.

Wide differences existed in the relative money value of the chief sources of calories and protein (Table 7). Dairy products were, in terms of value,

a/

Table 7.- Percentage Distribution of Calories, Protein, and Retail Value by Class of Food, Prince Edward Island Farm Households, 1945-46

Food	Calories	Protein	Retail value
- per cent -			
Dairy Products (excluding butter)	17	22	15
Meat	9	14	17
Poultry and game	1	2	4
Fish	1	6	3
Eggs	2	6	8
Fats and oils	11	0	9
Sugars and other sweets	8	0	5 b/
Potatoes	9	7	5
Grain products	33	36	7 c/
Other	9	7	27
Total	100	100	100

a/ Based on seasonal quantities and values weighted as follows: fall, 4; winter-spring, 5; summer (July 22-August 4) 3.

b/ Including jam, jelly, and marmalade.

c/ Including purchased bakery products.

efficient suppliers of both calories and protein. The fish eaten provided more protein per dollar than the meat, poultry, and game. Grain products were exceptionally cheap sources of both calories and protein. As previously noted vegetable protein is not equal in some respects to protein from animal sources.

HOME PRODUCED FOOD CONSUMED

Home produced food benefits the farm family economically if the cost of its production is lower than the purchase price. When home production lowers the cost of certain foods the saving may be used in the purchase of other foods and a more varied diet may result.

The full nutritive value of fruit and vegetables is obtained when they are consumed immediately at their source, and their palatability and that of other foods, e.g., eggs, is enhanced by freshness. On the other hand, farm produced food kept for later use may lose both nutritive value and palatability if the storage facilities are poor.

A third advantage of home production is the convenience of having a store of food on hand, particularly where centres of supply are not very accessible.

The home produced food eaten by the Prince Edward Island farm households was worth, at the current retail prices, \$2.09 per person per week in the fall, \$1.62 in the winter-spring, and \$1.90 in the summer, averaging \$1.85. Thus, out of every dollar's worth of food consumed the value of that supplied on the farms or from wild sources was 59 cents in the fall, 50 cents in the winter-spring, 54 cents in the summer, and 54 cents on the average.

No skim milk or buttermilk and only very small quantities of whole milk and cream were purchased (Table 8). Hence, 91 per cent of the total weight of the milk solids consumed were home produced. Since the prices per pound of the milk solids in the purchased dairy products, cheese, canned milk, and ice cream, were higher than in the home produced products, the value of the latter was only 85 per cent of the total value of the dairy products, excluding butter, which were consumed (Table 9).

Of all the meat (carcass weight) eaten the average proportion produced at home was 40 per cent. In the summer, meat could not be easily kept since only 17 per cent of the households reported the use of ice or other refrigeration. The proportion by weight of the meat home produced was 51 per cent in the winter-spring but fell to 27 per cent in the summer. In terms of value the percentage home produced differed somewhat from that in terms of weight because of differences between cuts in value per pound of carcass weight.

Almost all of the poultry and eggs were home produced. All the game but very little of the fish was self supplied.

Of the butter eaten only a little more than half was made on the farms. The quantity of home produced lard was very small.

a/

b/

Table 8.- Weights of Home Produced Foods Consumed per Person per Week,
by Season, Prince Edward Island Farm Households, 1945-46

Foods	Weight per person per week				Home produced proportion of total weight consumed
	October, 1945		February-May, 1946	July-August, 1946	
	- pounds -	- pounds -	- pounds -	- pounds -	
DAIRY PRODUCTS					
(excluding butter) d/	1.50	1.32	1.63	1.47	91
Fluid whole milk	8.74	7.72	9.86	8.60	100
Fluid cream	1.01	.73	1.06	.90	98
Skim milk and butter-milk	.84	1.13	.29	.82	100
MEATS e/					
Beef and veal e/	.75	1.02	.50	.80	40
Lamb and mutton e/	.44	.36	.27	.37	27
Pork (excluding lard) e/	.14	.00	.00	.05	91
Pork (excluding lard) e/	.16	.63	.23	.37	63
POULTRY, GAME and FISH f/					
Poultry g/	.30	.19	.23	.24	35
Fish f/	.46	.26	.38	.36	96
Fish f/	.03	.07	.06	.05	11
EGGS					
	.82	.84	.84	.83	97
FATS and OILS h/					
Butter	.26	.26	.25	.26	39
Butter	.31	.27	.29	.29	53
POTATOES					
	7.41	6.60	5.40	6.57	97
PULSES and NUTS					
Pulses	.07	.02	.02	.03	16
Pulses	.07	.02	.02	.03	20
TOMATOES and CITRUS					
FRUIT i/	.17	.03	.00	.07	5
Tomatoes i/	.17	.03	.00	.07	12

a/ Retail weight except where otherwise stated.

b/ Including (1) self supplied foods such as fish and game, and (2) the principal home produced ingredients of home preserved foods, e.g., home grown fruit in jam made on the farm.

c/ Pounds consumed per person per week weighted as follows: fall, 4; winter-spring, 5; summer (July 22-August 4) 3.

d/ Milk solids.

e/ Carcass weight. Edible weight of offal included in "Meats".

f/ Edible weight. Fresh filleted weight of fish.

g/ Dressed, not drawn.

h/ Fat content.

i/ Fresh equivalent weight.

- Continued

a/

b/

Table 8.- Weights of Home Produced Foods Consumed per Person per Week, by Season, Prince Edward Island Farm Households, 1945-46 - Continued

Foods	Weight per person per week			Home produced	
	October, 1945		February-May, 1946	July-August, 1946	proportion of total weight consumed
	:	:	:	Average	:
	- pounds -				
FRUIT OTHER than CITRUS i/					- per cent -
Fresh, Total	2.67	.56	.85	1.33	81
Apples	2.57	.52	.02	1.08	87
Other	.10	.04	.83	.25	61
VEGETABLES i/	6.21	3.37	1.60	3.87	90
Fresh, Total	5.84	3.18	1.46	3.64	94
Leafy, green, and yellow	2.46	.90	.94	1.44	94
Other	3.38	2.28	.52	2.20	94
GRAIN PRODUCTS	.08	.00	.06	.04	1

i/ Fresh equivalent weight.

Nearly all the potatoes eaten were home grown. However, a few families purchased potatoes, particularly in the summer period when their supplies of old potatoes were exhausted and the new crop was not ready for use.

Of the weight of the dried peas and beans eaten, 20 per cent was home produced.

In terms of weight (fresh equivalent) about one-eighth of the tomatoes consumed were home produced, but since most of those which were home grown were eaten fresh and had a higher value per pound than those in the purchased canned product, the proportion home produced was, in terms of value, about one-fifth.

Most, 87 per cent by weight, of the fresh apples and 61 per cent (78 per cent in the summer) of the weight of the other fresh fruit were home produced. However, less than half, 41 per cent, of the fresh equivalent weight consumed of all fruit other than citrus was grown on the farms, since the amount of imported dried fruit eaten was large.

Ninety-four per cent of the fresh vegetables, and thus 90 per cent of the fresh equivalent weight of the two main classes of vegetables eaten, were grown on the farms.

Home produced quantities of other food classes were very small. They included a little honey and a small quantity of cereals.

a/

Table 9.- Retail Value of the Home Produced Foods as Percentages of the Retail Values of the Foods Consumed, by Season,
Prince Edward Island Farm Households, 1945-46

Foods	Proportion of Value of food consumed				: Average b/ value of home produced : food consumed b/: per person : per week
	October, February-May, July-August,		: 1945 : 1946 : 1946 : Average	b/: - per cent -	
	: 1945 :	: 1946 :			
TOTAL	59	50	54	54	.1.85
DAIRY PRODUCTS (excluding butter)	87	84	85	85	.44
MEATS c/	32	51	24	38	.22
POULTRY and GAME	95	100	98	97	.14
FISH	14	16	24	17	.02
EGGS	100	95	98	98	.28
FATS and OILS c/ Butter	46	45	46	46	.13
	52	56	51	53	.13
POTATOES	98	98	93	97	.18
PULSES	41	7	9	15	.00
TOMATOES	51	4	0	22	.01
FRUIT OTHER than CITRUS	73	31	70	58	.16
LEAFY, GREEN, and YELLOW VEGETABLES	96	68	78	81	.11
OTHER VEGETABLES	97	84	85	90	.10
JAM, JELLY, and PICKLES	72	57	72	68	.05

a/ Including (1) self supplied foods such as fish and game, and (2) foods of which the principal ingredients were home produced, e.g., jam made on the farm from home grown fruit.

b/ Seasonal values weighted as follows: fall, 4; winter-spring, 5; summer (July 22-August 4), 3.

c/ Very fat salt pork excluded from "Meats" and included in "Fats and Oils".

High rates of consumption on the farms in comparison with all of Canada were associated with home production of some foods. On the farms milk solids from dairy products, excluding butter, exceeded the Canadian average by one-sixth. Farm consumption of eggs was about one-third higher, of potatoes 80 per cent higher, of fresh fruit 60 per cent higher, and of vegetables one and one-third times higher, than by all Canadians. Approximately 80 per cent of the fresh fruit and at least 90 per cent of the other products above named were produced on the farms. Only a small proportion of the tomatoes eaten were home produced and the total consumption was low. On the other hand, the high rates of consumption of fish, dried fruit and grain products were unrelated to home production, and although a larger part of the pork than of the beef consumed was home produced the consumption of the latter on the farms was closer to Canadian consumption than was that of pork.

Distribution of the Retail Value of the Home Produced Food Consumed by Food Groups.— Of each dollar's worth of food produced and consumed on the farms or self supplied, dairy products, excluding butter, had an average value of 24 cents. When butter was included the value of the dairy products rose to 31 cents (Table 10).

a/

Table 10.— Percentage Distribution of Home Produced Foods, in Terms of Retail Value, by Season, Prince Edward Island Farm Households, 1945-46

Foods	a/			
	Percentage of retail value of home produced Food			
	October, 1945	February-May, 1946	July-August, 1946	b/ Average
- per cent -				
DAIRY PRODUCTS (excluding butter)				
Fluid whole milk	22.4	24.4	25.1	23.8
Fluid cream	13.0	15.2	16.0	14.6
Skim and buttermilk	8.7	8.1	8.9	8.5
	0.7	1.1	.2	0.7
MEAT c/, POULTRY, and GAME	18.8	24.8	14.1	19.8
Beef and veal	5.1	6.5	3.4	5.1
Poultry	8.1	5.7	7.5	7.1
Pork c/	2.4	12.2	3.2	6.2
FISH	0.4	1.3	1.0	0.9
EGGS	14.6	15.1	16.0	15.1
FATS c/	6.5	7.7	7.3	7.1
Butter	6.3	7.3	7.0	6.8
PULSES	0.2	0.1	0.1	0.1

- Continued

Table 10.- Percentage Distribution of Home Produced Foods, in Terms of Retail Value, by Season, Prince Edward Island Farm Households, 1945-46 - Continued

Foods	a/			
	Percentage of retail value of home produced food			
	October, 1945	February-May, 1946	July-August, 1946	b/ Average
- per cent -				
POTATOES	8.9	10.6	9.1	9.6
TOMATOES	1.2	0.1	0.0	0.5
FRUIT	10.0	4.5	13.7	8.9
Fresh, Apples	8.8	3.7	0.1	4.3
Other	0.9	0.6	12.9	3.9
LEAFY, GREEN, and YELLOW VEGETABLES	6.2	4.1	7.9	5.9
OTHER VEGETABLES	7.2	5.6	2.7	5.5
GRAIN PRODUCTS	0.1	0.0	0.1	0.1
JAM, JELLY, and PICKLES	3.5	1.7	2.9	2.7
	100.0	100.0	100.0	100.0
- dollars -				
Value of home produced food per person per week	2.09	1.62	1.90	1.85

a/ Including (1) self supplied foods such as fish and game, and (2) foods of which the principal ingredients were home produced, e.g., jam made on the farm from home grown fruit.

b/ Seasonal values per person per week weighted as follows: fall, 4; winter-spring, 5; summer (July 22-August 4), 3.

c/ Very fat salt pork excluded from "Meat" and included in "Fats".

The meat, poultry, game, and fish were worth 21 per cent of the total on the average, but in the winter-spring season the proportion increased to 26 per cent, and in the summer it was as low as 15 per cent.

Eggs had a relatively stable share, averaging 15 per cent, of the value of all the home produced food.

All the vegetables, including potatoes which were worth ten per cent, and pulses and tomatoes of which those home produced had little monetary

value, were on the average approximately equal in value to the meat, poultry, game, and fish. Their value ranged from 20 to 24 per cent of the total in each season. The two main classes of vegetables other than potatoes decreased considerably in their proportion of the total value from the fall, when they were abundant, to the winter-spring. The "other than leafy, green, and yellow" class was even less important in the summer.

Fruit, responsible for nine per cent of the average value of the home produced food, provided a lower proportion of the total in the winter-spring and a higher proportion in the summer when fresh berries were in season.

Home Preserved Foods Consumed.— The special advantages to be gained in the preservation on the farm of home produced foods are: (1) the preservation is done when the foods are most plentiful and at their lowest price, and when in fact they might otherwise be wasted; (2) the raw products are at the stage of best development, and flavour and nutritive value are retained by preservation close to the source of supply (3) the preserved foods are used at a time when fresh foods of the same kind are scarce.

The preserved foods which were consumed on the farms included cured meat and fish and canned or bottled fruit and vegetables in various forms. Of those about 40 per cent by weight and 55 per cent by value were produced on the farms or supplied from wild sources and preserved at home (Table 11).

Table 11.— Average a/ Weight and Retail Value per Person per Week
of Certain Home Produced and Preserved Foods Consumed,
Prince Edward Island Farm Households, 1945-46

Foods	Weight		Value	
	Percentage		Percentage	
	Per person per week	of total consumed	Per person per week	of total consumed
	- pounds -	- per cent -	- cents -	- per cent -
Beef, corned b/	.02	32	0.5	30
Pork, cured b/	.14	66	4.6 d/	61 d/
Fish, cured c/	.01	3	0.1	3
Meat, poultry and fish, canned	.13	74	7.0	82
Tomatoes, canned	.01	4	0.1	4
Fruit, canned	.07	40	1.4	47
Jam and jelly	.10	61	2.1	63
Vegetables, canned	.08	31	1.0	31
Pickles	.11	82	2.8	80
Total	.67	41	19.6 d/	55 d/

a/ Seasonal weights and values per person per week weighted as follows: fall, 4; winter-spring, 5; summer (July 22-August 4), 3.

b/ Retail weight.

c/ Fresh edible weight.

d/ Excluding very fat salt pork.

On the Prince Edward Island farms 0.14 pounds per person per week of home produced and home cured pork were used. This was two-thirds of the retail weight of the cured pork eaten. Most of the home cured pork was consumed in the winter-spring season although fresh pork consumption was also higher at that time.

Foods produced on the farms or obtained from wild sources and preserved in cans or glass included meat, poultry, fish, tomatoes, fruit, jam and jelly, vegetables, and pickles. The weight consumed was half a pound per person per week and this was 44 per cent of the total weight eaten of such preserved foods. In terms of retail value the proportion was 61 per cent. Because of their relatively high value, especially that of poultry, home canned meat, poultry and fish constituted about one-fourth by weight, but nearly one half by value, of the above canned and bottled foods consumed.

Meat, poultry and fish grouped together formed the largest item of home produced and home preserved foods and were consumed to the extent of one-eighth of a pound per person per week. Pickles were next in importance followed by jam and jelly. Jam and jelly made from home-grown fruit amounted to 61 per cent of all jam and jelly consumed. In addition, 22 per cent of the total jam, jelly and marmalade consumed was made at home from purchased fruit. About one-sixth of the canned fruit consumed was also home preserved from purchased fruits.

Difference between Farm and Retail Value of Home Produced Food.— The saving made by producing food for home consumption might be considered to be the difference between the prevailing sale and purchase values of the food. It was possible to learn the retail prices of most foods produced for home consumption from the local stores, but to have determined the prices for which products of the same quality would be sold by farmers in the same locality and at the same time would have required an additional survey. Consequently it was possible to estimate the differences between the farm and retail values of those products produced and consumed on the farms of the survey (Table 12).

The computed "saving" was 53 cents per person per week on the above products, of which the retail value was approximately 68 per cent of the retail value of all the home produced food. If similar "savings" had been made on the remaining 42 per cent, the difference between the farm and retail value of the home produced food would have amounted to 78 cents per person per week or 21 per cent of the retail value of all the food consumed.^{1/}

^{1/} Retail value of food consumed was \$3.68 when adjusted for urban prices plus subsidies for dairy products.

Table 12.- Comparison of Retail and Farm Values of Certain
Home Produced Foods Consumed by Prince Edward Island
Farm Households, 1945-46

Foods	: Value of home produced food consumed per person per week ^{a/}	: Margin 1946 b/	: Saving per person per week	: Proportion of value of home produced food consumed a/
	- cents -	- per cent -	- cents -	- per cent -
Milk c/	46	49.4	23	22
Butter	15	24.1	4	7
Meats d/	37	35.1	13	18
Eggs	28	23.3	6	13
Potatoes	18	37.6	7	8
Total	144		53	68

a/ Based on urban retail prices plus subsidies in force during 1945-46 on fluid whole milk and cream in butter. Seasonal values are weighted for averaging as follows: fall, 4; winter-spring, 5; summer (July 22-August 4), 3.

b/ Hillhouse, F.W. and Schrader, F.M. Marketing Margins for Selected Canadian Agricultural Products 1935-49. p. 8. Canada Department of Agriculture. Economics Division, Ottawa. 1950.

c/ Includes skim milk and buttermilk.

d/ Includes poultry and game. Margin applicable to beef assumed to apply to all meat, poultry, and game.

VARIATIONS IN CONSUMPTION OF FOOD BY CLASSES OF HOUSEHOLD

The farm households were classified along the following lines:

1. Value of food per food-cost unit per week;
2. Type of farm;
3. Proportion of food home produced;
4. Number and age of children;
5. Economic level.

Each household was placed in its appropriate group in each of the above classifications, except where the data available were insufficient.

Individuals of different age, sex, and activity differ in their food requirements. Accordingly, the "person" is not a satisfactory consuming unit for comparing food consumption rates by different classes of families. For this purpose a consuming unit which evaluates individuals according to their food needs is desirable.

Such a unit was developed by the Bureau of Home Economics of the United States Department of Agriculture.^{1/} It was called the "food-expenditure unit", since it was based on a study of relative costs of diets. That unit, and the scale of values for the various classes of individuals in terms of it, was adopted for the analysis of the Prince Edward Island farm data. However, as a large proportion of farm food is self-supplied, the term "food-cost unit", which does not imply cash outlay, was deemed more appropriate for this study.

According to the scale a moderately active man is one food-cost unit. A very active man, such as one engaged in heavy manual labour, requires more food and is rated as 1.12 food-cost units. Boys from 12 to 19 years old exceed one food-cost unit, while all girls except those 14-19, and women, unless very active, have ratings less than one food-cost unit. As requirements for most food classes vary in fairly similar proportion to the cost of the whole diet the scale is reasonably appropriate for comparison of consumption rates of most foods by the various classes of farm households under consideration. However, young children who have relatively low food-cost unit ratings require more milk than do adults. Consequently, in the following analysis, and in Table 22, consumption rates of fluid whole milk, and of total dairy products, of which fluid whole milk is the principal constituent, are expressed on a per person basis, whereas consumption rates of other foods are generally expressed on a per food-cost unit basis. Factors for the conversion of consumption per food-cost unit to consumption per person are shown in the second column of Table 22.

Value of Food per Food-Cost Unit per Week.— The value of the food consumed by each household was divided by its number of food-cost units. The households were then separated in the following classes according to value of food per food-cost unit per week:

1. Less than \$3.00;
2. \$3.00 to \$3.99;
3. \$4.00 or more.

It is no doubt true that a number of the respondents to the questionnaire underestimated their food consumption and a number overestimated it, and to that extent this classification is less useful. Those who underestimated would be likely to fall in the two groups of lowest value of food and those who overestimated to fall in the two of highest value.

Considerable variation in the value of the food of a single household might be expected from one particular week to another even though a certain level was usually maintained. In addition there was a movement of individual households from one value of food group to another at the different seasons, because the trend in values of food was downward from the fall to the winter-spring season and again upward to the summer. The weighted average consumption rates of each class therefore do not represent those of single sets of households for the year but do allow a general comparison of the diets in three strata with the farm average.

^{1/} United States Department of Agriculture. Bureau of Home Economics. Consumer Purchases Study. Farm Series. Family Food Consumption and Dietary Levels. Five Regions. p. 372. Washington, D.C. 1941. (Misc. Pub. 405).

In the fall, winter-spring, and summer respectively the proportions of the households falling in the low class were 27 per cent, 35 per cent and 22 per cent, and in the high class, 43 per cent, 28 per cent and 43 per cent. Since values of the third class were at least one-third greater than those of the first class, there was a sharp difference in the quantities of food consumed by those classes.

Classification of the households on the basis of value of food per food-cost unit apparently segregated very effectively those with low and high rates of consumption of every major class of food (Table 22).

As a high rate of consumption for relatively high priced foods tended to place a household in one of the higher value of food brackets, it is natural that the widest variations in rate of consumption should appear for such foods. The range in the consumption of poultry was especially wide. The next greatest differences in the rate of consumption between the highest and lowest value of food groups appeared in the following food classes: tomatoes and citrus fruit, leafy, green, and yellow vegetables, and fruit other than citrus. These are important as suppliers of vitamins and minerals but since they are not "satisfying" foods their inclusion in the diet does not necessarily reduce the consumption of other foods.

The foregoing food classes each made up a greater part of the food dollar of those households with the highest value of food per food-cost unit than of that of other households (Table 13). Other food classes which took increasing shares of the food dollar as the value of all food consumed increased were meat, fish, and purchased bakery products. The weight of fish consumed per food-cost unit increased only moderately from the group of low value of food to that of high value. The reasons for the much greater value of the fish consumed by the latter was that in each season over 60 per cent of the shell fish, which were much higher in price than other fish, were consumed by that class. The portion of the food dollar accounted for by eggs, pulses and nuts, beverage materials and the unclassified group of foods varied little with the value of all food consumed. Rates of consumption of those food classes which are the most economical sources of calories, namely fats and oils, potatoes, grain products, sugars and other sweets did not increase as sharply as the value of all food consumed increased, with the result that they made up decreasing shares of the food dollar. Dairy products, and the "other" vegetable class of which turnips, relatively cheap and satisfying, were a major part, also declined in relative value as that of all food consumed increased. The consumption of milk and consequently of dairy products was probably influenced by the fact that the proportion of families with more than two children decreased as the value of food consumed per food-cost unit increased. Thus the requirements for milk per food-cost unit were lower for the class with a value of food of \$4.00 or more than for the "under \$3.00" class, and the relatively small increase with value of diet in weight consumed represented a considerably more satisfactory supply of milk.

Table 13.- Percentage Distribution of Foods Consumed in Terms of Retail Value a/, by Value of Food Consumed per Food-Cost Unit b/ per Week, Prince Edward Island Farm Households, 1945-46

Classes of food	Value of food consumed per food-cost unit per week		
	: Less than	:	:
	\$3.00	\$3.00-\$3.99	\$4.00 or more
	:	:	:
- per cent -			
Dairy products (excluding butter)			
Meat <u>c/</u>	16.9	15.7	13.3
Poultry and game	16.7	17.5	17.9
Fish	2.5	3.6	5.5
Eggs	2.5	2.4	3.5
Fats <u>c/</u> and oils	8.0	8.7	8.4
Sugars and other sweets	10.0	8.6	7.2
Potatoes	5.0	5.2	4.4
Pulses and nuts	6.6	5.6	4.5
Tomatoes and citrus fruit	.9	.8	1.1
Fruit other than citrus	7.2	4.2	4.3
Leafy, green, and yellow vegetables	7.2	8.2	9.2
Other vegetables	3.1	3.9	4.5
Grain products	3.9	2.9	3.1
Bakery products purchased	6.3	5.9	5.0
Beverage materials	1.3	1.4	2.3
Unclassified <u>d/</u>	2.6	2.5	2.4
Total	3.3	2.9	3.4
- dollars -			
Value of food per food-cost unit per week	100.0	100.0	100.0
- number -			
Average number of households per season	2.51	3.45	4.85

a/ Average value of food consumed obtained by weighting seasonal values as follows: fall, 4; winter-spring, 5; summer, 3.

b/ Moderately active man.

c/ Very fat salt pork excluded from meat and included in fats.

d/ Jam, jelly, marmalade, pickles, mincemeat, canned soups, packaged desserts, flavourings, seasonings and cooking accessories.

As the value of all food consumed increased, values of purchased and home produced foods increased at very similar rates with the result that the proportion home produced was stable near the farm average of 54 per cent (Table 14). Thus, it is apparent that the lowest valued diets could have been improved considerably if it had been feasible to produce equal quantities of food per food-cost unit on all farms. Quantities consumed of most home produced foods increased in about the same proportions as did the values of all foods consumed, although butter was an exception. At the lowest value of food level, most butter per food-cost unit was produced for home consumption although relatively little cream was available for other uses.

a/

b/

Table 14.- Average Retail Value per Food-Cost Unit per Week of the Total Food Consumed and of the Home Produced c/Food Consumed, by Value of Food per Food-Cost Unit per Week, Prince Edward Island Farm Households, 1945-46

Value of food per food-cost unit per week	: Value of food per food-cost :			Home produced as a percentage of total
	Average number of households per season	unit per week	Total	
	: per season	: Home produced	:	
	- number -	- dollars -		- per cent -
Less than \$3.00	23	2.54	1.34	53
\$3.00 to \$3.99	28	3.44	1.93	56
\$4.00 or more	32	4.81	2.58	54
Prince Edward Island	83	3.53	1.92	54

a/ Seasonal values, weighted as follows: fall, 4; winter-spring, 5; summer, 3.

b/ Moderately active man.

c/ Including (1) self supplied foods such as fish and game, and (2) foods of which the principal ingredients were home produced, e.g., jam made on the farm from home grown fruit.

As value of all food rose from the lowest to the highest level that of home canned and bottled foods increased from eight to 26 cents per food-cost unit per week. However, purchased preserved foods were also used in greater amount, so that the value of the home preserved foods as a proportion of the value of all the preserved foods consumed varied little.

Type of Farm.— Of the 88 survey farms for which sufficient information for classification by type was obtained, all but 14 had sold at least \$600 worth of agricultural products in the previous year and were classified as "commercial". These fell mainly into three classes, "potato", "livestock" and "mixed" depending on the products which provided at least 50 per cent of the agricultural revenue. On a number of the 12 livestock farms much of the income was derived from fur production. With such a small and diverse group, findings as to the relation of this type of farm to diet would not be expected to be reliable and therefore they are not presented. Data from the non-commercial farm households have also been omitted since such households did not form a homogeneous group, some having much higher incomes than

others, and since only seven winter-spring reports were received from them.

The crop year 1945-46 was a particularly prosperous one for Prince Edward Island potato farmers and this was perhaps reflected in the somewhat higher value of the food purchased per food-cost unit per week on their farms (Table 15).

a/ b/
 Table 15.- Average Retail Value per Food-Cost Unit per Week
 of the Total Food Consumed and of the Home Produced c/
 Food Consumed, by Type of Farm, Prince Edward
 Island Farm Households, 1945-46

Type of farm	Average number of households per season	Value per food-cost unit: per week	Home produced as a percent- age of total
	Total	Home produced	age of total
- number -			
Potato	30	3.74	1.96
Mixed	22	3.38	1.98
Prince Edward Island	83	3.53	1.92
			52
			59
			54

a/Seasonal values weighted as follows: fall, 4; winter-spring, 5; summer, 3.

b/ Moderately active man.

c/ Including (1) self supplied foods such as fish and game, and (2) foods of which the principal ingredients were home produced, e.g. jam made on the farm from home grown fruit.

The consumption rates of the potato farm families were 13 per cent above the survey average for fluid milk and 20 per cent above average for skim and buttermilk (Table 22). The mixed farms had similar consumption rates to those of the potato farms for cream and skim and buttermilk but were lower in their intake per person of fluid whole milk. Both groups consumed less canned milk than the survey average.

On the potato farms the consumption of total meat and in particular, pork and purchased bread exceeded the survey average by more than 15 per cent and families on those farms consumed nearly 60 per cent more canned vegetables than the survey average. Among the foods listed in Table 22, the consumption rates of only the following were below 90 per cent of the survey average: pulses, tomatoes, fresh leafy, green, and yellow vegetables, and prepared and refined cereals. The last two classes are not mutually exclusive and are influenced by relatively low rates of consumption for specific cereals included in both.

Households on mixed farms ate per food-cost unit at least 115 per cent of the survey average of the following foods of Table 22 in addition to skim milk and buttermilk: cured fish, tomatoes, fresh apples, and refined cereals. Only canned vegetables and bakers' bread were consumed at rates lower than 90 per cent of the survey average.

Except for those foods which were predominantly home produced by all classes of household the extent of home production did not necessarily influence the rate of consumption. For example, the families on mixed farms ate over twice as much, in terms of value, of home produced beef, as did the potato farm families but nevertheless ate less beef all told than did the latter families. However, the relatively high rate of consumption of canned vegetables on the potato farms was associated with the use of home produced canned vegetables to three times the value of those home produced on the mixed farms.

Proportion of Food Home Produced.— In each season the households were divided into three classes according to their producing on the farm or supplying from wild sources food worth the following proportions of the total value of the food consumed:

1. Less than 40 per cent;
2. 40 to 59 per cent;
3. 60 per cent or more.

The differences in the average value of the food consumed per food-cost unit at the three levels of home production were slight (Table 16).

a/ b/

Table 16.— Average Retail Value per Food-Cost Unit per Week of the Total Food Consumed and of the Home Produced c/ Food Consumed, by Proportion of Food Home Produced in Terms of Retail Value, Prince Edward Island Farm Households, 1945-46

Proportion of Food home produced	Value of home produced as a percentage of total value			:
	Average number of households per season	Value per food cost unit: per week	Total Home produced	:
— number — — dollars — — per cent —				
Less than 40 per cent	15	3.51	1.20	34
40 to 59 per cent	41	3.59	1.83	51
60 per cent or more	27	3.44	2.42	70
Prince Edward Island	83	3.53	1.92	54

a/ Seasonal values weighted as follows: fall, 4; winter-spring, 5; summer 3.

b/ Moderately active man.

c/ Including (1) self supplied foods such as fish and game, and (2) foods of which the principal ingredients were home produced, e.g., jam made on the farm from home grown fruit.

As the proportion produced at home of all food consumed increased, the rates of consumption of the following foods showed a definite consistent upward trend: fluid milk, poultry, butter, potatoes, pulses, tomatoes, apples and both of the main classes of vegetables (Table 22). All these foods except butter, pulses, and tomatoes were dominantly home produced. On the other hand, a downward trend in rate of consumption was apparent for cheese,

Table 17.— Average Retail Value per Food-Cost Unit per Week of Certain Home Produced and Home Preserved Foods Consumed, by Proportion of Food Home Produced in Terms of Retail Value, Prince Edward Island Farm Households, 1945-46

Proportion of food home produced	Number	Value per Food-cost unit per week			Proportion		
		Food	Preserved	Total	Food	Preserved	Total
— number —							
Less than 40 per cent	15	2.0	1.7	1.3	1.0	2.6	8.6
40 to 59 per cent	41	3.2	0.9	2.5	1.4	3.0	11.0
60 per cent or more	27	15.8	2.2	2.2	1.2	3.2	24.6
Prince Edward Island	83	7.3	1.4	2.2	1.1	3.0	15.0
		— cents —			— per cent —		

a/ Seasonal values weighted as follows: fall, 4; winter-spring, 5; summer, 3.

b/ Moderately active man.

c/ Canned and bottled meat, poultry, fish, fruit, jam, jelly, vegetables, tomatoes and pickles.

d/ Including tomatoes.

beef, sugar content of sugars and syrups, nuts, dried fruit, canned vegetables, purchased bread and cereals to cook. Well over half of the amount consumed of the beef and canned vegetables and nearly all of the other foods above named were purchased. A variety of other foods were consumed at rates considerably above or below average by the lowest or highest classes in this stratification, e.g., the consumption of fluid cream was particularly low where less than 40 per cent of the food was home produced.

Home canning increased with total home production of food in very similar proportions. Those who produced less than 40 per cent of their food at home, canned or bottled from home grown products less than 40 per cent of the quantity of canned and bottled foods they consumed, while those who produced over 60 per cent of their food preserved at home over three-quarters of the amount consumed of such canned and bottled foods (Table 17). Nevertheless, both canned fruit and canned vegetables were consumed in the greatest quantities per food-cost unit by the families who produced the least food at home, while the home preserved quantity varied little with home production. The greater part of the variation in the value of home canned and bottled foods was related to meat, poultry, and fish.

Number and Age of Children. -1/ The households were classified on the basis of the number and age of the children they contained, as follows: 2/

1. None;
2. One or two under 13 years;
3. More than two under 13 years;
4. More than two, at least one in each age group, (a) under 13 years and (b) 13 years or over.

The retail value of the food eaten per food-cost unit by households of adults only was 20 per cent greater, and that of households containing only one or two young children was 14 per cent greater, than the corresponding values when there were more than two children in the household (Table 18). The larger number of dependents in the latter groups evidently reduced the money available per unit for food.

Canada's Food Rules recommend the following quantities of milk per day for:

1. Children up to about 12 years, at least one pint;
2. Adolescents, at least 1½ pints;
3. Adults, at least ½ pint.

The milk requirements of the four household composition groups thus increased in the order in which they are listed, but a slight decrease in consumption

1/ Eighteen years of age or under.

2/ The maximum number in any season of households having only children between 13 and 18 years of age was 2, and of households having one child under 13 years and 1 child 13 years of age or over, the maximum number was 5.

per person of milk and a decrease of over 20 per cent in that of milk solids were recorded, so that supplies were least satisfactory for the fourth group. Nevertheless, if each member of that group had received his minimum allowance of fluid milk the average for the group would have been about eight pounds per person per week, somewhat less than the actual average. Even though distribution may not have been in accordance with need, most individuals in the class probably received fairly adequate quantities of milk solids from fluid milk and other sources.

a/
Table 18.- Average Retail Value per Food-Cost Unit per Week
of the Total Food Consumed and of the Home Produced c/Food
Consumed, by Number and Age of Children d/, Prince
Edward Island Farm Households, 1945-46

Number and age of children			Value of food per food-cost: unit per week		Home pro-
	Average number of households	of season	Total	duced as a percentage of total	
	- number -		- dollars -	- per cent -	
None	28		3.86	2.11	55
1 or 2 under 13	15		3.67	2.24	61
More than 2 under 13	11		3.20	1.74	54
More than 2, at least 1 in each age group <u>e/</u>	15		3.22	1.72	53
Prince Edward Island	83		3.53	1.92	54

a/ Seasonal values weighted as follows: fall, 4; winter-spring, 5; summer, 3.

b/ Moderately active man.

c/ Including (1) self supplied foods such as fish and game, and (2) foods of which the principal ingredients were home produced, e.g., jam made on the farm from home grown fruit.

d/ Eighteen years of age or under.

e/ (1) Under 13 years of age; (2) 13 years of age or over.

The all-adult households had high consumption rates of beef, poultry, and fish on a food-cost unit basis (Table 22). Meat and poultry consumption rates were particularly low by the larger families with young children. The other group of households having more than two children also ate relatively little beef and poultry.

All groups classified on the basis of number and age of children, except the one containing families with more than two children under 13, had approximately the survey average rate of consumption of tomatoes and citrus fruit (Table 19). It has been noted previously that this rate was low in comparison with the Canadian average and recommended allowances.1/ Consequently,

1/ Department of National Health and Welfare. Nutrition Division. Healthful Eating. p. 24. Ottawa, 1952.

the relatively low rate of consumption for the larger families of young children is of special dietary significance. This group obtained less tomatoes and citrus fruit per person than did any of the groups of Table 22, except the lowest "value of food" class, although its consumption of citrus fruit was a little above the survey average.

a/ b/

Table 19.- Average Weight Consumed per Person per Week of Tomatoes and Citrus Fruit, by Number and Age of Children c/, Prince Edward Island Farm Households, 1945-46

Number and age of children	Average number of households per season	Average number - number -	Tomatoes and citrus fruit	Tomatoes	Fresh citrus
None	28		1.34	.56	.71
1 or 2 under 13	15		1.27	.61	.61
More than 2 under 13	11		1.00	.31	.68
More than 2, at least 1 in each age group d/	15		1.33	.67	.58
Prince Edward Island	83		1.29	.56	.66

a/ Seasonal consumption weighted as follows: fall, 4; winter-spring, 5; summer 3

b/ Fresh equivalent retail weight.

c/ Eighteen years of age or under.

d/ (1) Under 13 years of age; (2) 13 years of age or over.

The consumption rates of leafy, green, and yellow vegetables, important sources of vitamins and minerals, varied from 112 per cent of the survey average by the all-adult group to 85 per cent by the households having more than two young children.

Although the food-cost unit scale may not have compensated completely for differences in the needs of adults and children for meat and poultry, some of the differences in consumption by the two groups above were no doubt due to the better economic position of the former. When the households were classified according to economic level 75 per cent of the families with two or more children under 13, compared with 23 per cent of all families, fell in the "low" group. Of all the foods listed in Table 22 the consumption rates by the adult families were below 90 per cent of average only in skim milk and buttermilk, cured pork, molasses, pulses, nuts, and refined cereals, most of which are relatively inexpensive foods. On the other hand, the households containing more than two children, all under 13, not only had low rates of consumption of the classes of food already noted but also of eggs, fruit other than citrus, and grain products.

There appeared to be a relation between number and age of children and value of home canned and bottled foods consumed (Table 20). Consumption per food-cost unit per week of home canned meat, poultry, and fish was much greater by the small families than by the larger. While the differences were

Table 20.— Average Retail Value per Food-Cost Unit per Week of Certain Home Produced and Home Preserved Foods^a, by Number and Age of Children^b,
Prince Edward Island Farm Households, 1945-46

Number and age of children	a/ Average number of households per season	b/ Value per food-cost unit per week	c/ Proportion of home produced and preserved		
			d/ Jam and Fruit and fish ^c	e/ Vegetables ^c	f/ Pickles ^c
— number —			— cents —		
None	28	11.6	2.0	3.6	1.8
1 or 2 under 13	15	12.7	1.4	2.0	1.3
More than 2 under 13	11	3.0	0.8	1.9	0.9
More than 2, at least 1 in each age group f/	15	3.7	1.2	1.1	0.7
Prince Edward Island	83	7.3	1.4	2.2	1.1

a/ Seasonal values weighted as follows: fall, 4; winter-spring, 5; summer 3.

b/ Moderately active man.

c/ Canned and bottled meat, poultry, fish, fruit, jam, jelly, vegetables, tomatoes and pickles.

d/ Eighteen years of age or under.

e/ Including tomatoes.

f/ (1) Under 13 years of age; (2) 13 years of age or over.

not as sharp with respect to other home canned and bottled foods they were in the same direction, with the result that the families with no children and those with one or two young children consumed twice as much in terms of value of all home canned and bottled foods as the larger families.

Economic Level.- The index of the economic level of the Prince Edward Island survey families was based on seven factors: value of farm, quality of housing and possession of certain facilities, gross family income, education, labour on the farm, participation in farm and home organizations, and size of fam.^{1/} These factors were weighted according to the degree of the relation of each to the others and are listed above in order of weight. Of the survey households, 23 per cent fell in the low, 32 per cent in the medium, and 27 per cent in the high group, 18 per cent being unclassified.^{2/}

It was to be expected that the value of the food per food-cost unit per week would rise from the low to the high economic level. The increase was from \$3.24 to \$3.80. The home produced food eaten not only rose in actual value per food-cost unit from the low to the high economic level but rose from 51 to 57 per cent of the total value of the food consumed at the low and high levels respectively.

The quantity of milk used per person by the households of high economic level was nearly one and one-fourth times the amount consumed by the low group, and in the consumption per person of milk solids from all dairy products except butter the rise was even greater (Table 22).

Meat consumption rose by over one-third from the low to the high economic level. Beef consumption increased with economic level by a greater percentage than did that of pork. Households at the high level consumed six times as much home produced beef and veal, in terms of value, as did those at the low economic level. Apparently the more prosperous farmer was the most likely to have a beef animal to butcher for home use. However, there was no consistent relation between the use of home produced pork and economic level.

Although the poultry eaten was almost entirely produced on the farms, its consumption rose markedly with the increasing prosperity of the farmer. Eggs were also used most freely by the group of high economic level, but whereas at the low level it was probably necessary to sell rather than to eat most of the poultry not required for egg production, apparently eggs were not considered to be a luxury and were eaten in as great amount as at the medium economic level.

The three groups varied little in quantity of fresh citrus fruit eaten per food-cost unit but the consumption of non-citrus fresh fruit and of fruit other than citrus in all forms increased by approximately 20 per cent as economic level rose from the low to the high level.

^{1/} The index was developed by Mrs. Flora Shefrin. A detailed description of the factors used and of the method of obtaining the index may be obtained on request.

^{2/} Prince Edward Island households were grouped with those of a similar survey in Nova Scotia for development of the index and the third of the combined group with the lowest index was classed as "low", and the next third "medium" and the top third "high".

Leafy, green, and yellow vegetables were also eaten in greater quantities as economic level rose, particularly from the low to the medium group.

Although the proportion of the total amount of bakers' bread eaten was very small even by the high group, the increase in the purchase of bread with rising economic level was marked.

On the other hand, the more prosperous families processed at home a larger proportion of the canned and bottled foods consumed than did the less prosperous (Table 21). The increase with economic level in the consumption of home canned meat, poultry, and fish was particularly sharp, but the consumption of other foods canned or bottled from self supplied produce also showed an upward trend.

Table 21.- Average Retail Value per Food-Cost Unit per Week of Certain Home
Produced and Home Preserved Foods, by Economic Level,
Prince Edward Island Farm Households, 1945-46

Economic level	Average number of households per season	Value per food-cost unit per week						Proportion of home produced of preserved of food Σ	
		Meat, poultry and fish			Jam Fruit canned				
		Vegetables canned	Jelly canned	Canned d/	Pickles	Total	per cent		
— number —		— cents —						— per cent —	
Low	19	2.5	1.0	1.4	0.4	2.1	7.4	52	
Medium	28	4.5	1.4	2.1	0.5	2.5	11.0	51	
High	22	13.2	2.0	2.9	2.5	4.1	24.7	71	
Prince Edward Island	83	7.3	1.4	2.2	1.1	3.0	15.0	61	

a/ Seasonal values weighted as follows: fall, 4; winter-spring, 5; summer 3.

b/ Moderately active man.

c/ Canned and bottled meat, poultry, fish, fruit, jam, jelly, vegetables, tomatoes, and pickles.

d/ Including tomatoes.

SUMMARY 1/

1. Comparison of the quantities of various food classes consumed by Prince Edward Island farm families with those available in Canada suggest that the farm diet was, on the whole, as satisfactory as that of the average Canadian. The farm people had relatively low rates of consumption of meat, poultry, sugars and syrups, and tomatoes and citrus fruit. However, they consumed per person considerably more than did all Canadians of fish, eggs, potatoes, fruit other than citrus, leafy, green, and yellow vegetables, vegetables classed as "other", and grain products.
2. The fall was the season of highest consumption of poultry, potatoes, fresh apples, and of both the major classes of vegetables. In the winter-spring smaller quantities per person of milk, cream, butter and poultry but larger quantities of fish, pulses, and of both tomatoes and citrus fruit were eaten than in the other two seasons. The consumption rates of milk, cream, fresh berries, and certain green vegetables were highest in the summer. Other vegetables were not yet mature in the summer survey period.
3. The calories provided by the diet exceeded the estimated requirements by about five per cent. The protein content of the food was more than adequate, 160 per cent of the amount required. Cereals were the source of approximately one-third of both the calories and the protein but one-half of the latter was of animal origin.
4. The food at retail prices was worth on the average \$3.41 per person per week, varying from \$3.24 in the winter-spring to \$3.52 in the fall and summer.
5. The value of the meat, poultry, game, and fish comprised almost one-fourth of the total of all the food. Dairy products, including butter, were worth nearly as much, 22 per cent. All vegetables, including potatoes and tomatoes, contributed 14 per cent of the value, and fruit, 11 per cent.
6. The home produced food was worth 54 per cent of the value of all the food. Nearly one-third of the value of the home produced food came from dairy products, including butter. The value of the home produced vegetables, including potatoes, was just over one-fifth, and that of meat, poultry, game, and fish was also approximately one-fifth, of the value of all the home produced food. Only 27 per cent of the carcass weight of the beef and veal, but 63 per cent of that of the pork consumed was home produced. Of the butter eaten 53 per cent was made at home.
7. The average weight eaten per person per week of home cured pork was .14 pounds and that of canned or bottled home produced foods was half a pound. Of the weight of the latter about one-fourth was meat, poultry, and fish and about one-fourth was pickles.

1/ Unless a season is mentioned the data of this section are the weighted averages of the three seasons.

8. The difference between the retail and farm values of the food produced at home was estimated to be 78 cents per person per week or about 20 per cent of the retail value of all the food eaten which amounted to \$3.68 when fluid dairy products were valued at urban prices.
9. When households were classified into three strata on the basis of the value of food per food-cost unit, wide differences in consumption appeared. That of every major food group with the exception of pulses and nuts increased regularly as value of food per food-cost unit rose. The smallest increases were in the inexpensive foods of high satiety value, namely, potatoes, grain products, and sugars and syrups, and the greatest were in foods such as poultry, tomatoes, leafy, green, and yellow vegetables, and fruits other than citrus.
10. The value of the food per food-cost unit of households on potato farms exceeded that of households on mixed farms by ten per cent. More meat, eggs, and vegetables other than leafy, green, and yellow were eaten per food-cost unit on potato farms, but the consumption of pulses and tomatoes was higher on the mixed farms.
11. The value of all food consumed per food-cost unit varied little as the home produced food became a larger percentage of the value of all the food eaten. The consumption rates of cheese, beef, sugars and syrups, nuts, dried fruit, canned vegetables, bakers' bread, and cooking cereals were highest on the farms of relatively low home production of food. These were largely purchased foods. On the other hand, fluid milk, poultry, butter, potatoes, pulses, tomatoes, apples, and fresh vegetable consumption rates were highest where home production was most important.
12. In value of food per food-cost unit the all-adult households ranked first among the household composition groups and the group with less than three children was second. The group with no children had the highest and those with more than two children under 13 years of age had the lowest rates of consumption of meat, poultry, and leafy, green, and yellow vegetables. The all-adult families also consumed the greatest quantity per person of milk solids, and per food-cost unit of fish, but ate the lowest quantity of pulses. Families having more than two children under 13 had not only the lowest rates of consumption of the foods noted above, but also of eggs, tomatoes, fruit other than citrus, and grain products.
13. As economic level rose the value of food per food-cost unit increased regularly. Increases in consumption of milk solids, meat, poultry, fruit other than citrus, and leafy, green, and yellow vegetables were most marked.

Table 22.— Average ^{a/} Weights ^{b/} Consumed of Certain Dairy Products per Person per Week and of Other Foods per Food-Cost Unit
per Week, by Class of Household, Prince Edward Island Farm Households, 1945-46

Class of Household	Value of Food per Food-Cost Unit per Week	Pounds per Person per Week										Pounds per Food-Cost Unit per Week											
		DAIRY PRODUCTS					Fluid					Skim and Cream					POULTRY					GAME and FISH	
		Average	Number of Households	Food-Cost Units per Person	Excluding Butter	Whole Milk	Fluid	Whole Milk	Cream	Buttermilk	Cheese	Beef	Lard	Total	Cured Fish	Poultry	Total	Fish					
1. Prince Edward Island	.83	.964	1.60	8.63	.96	.85	.16	2.05	1.38	.57	.22	.69	.38	.38	.49	.49	.22						
2. Less than \$3.00	23	.950	1.29	7.84	.63	.16	.10	1.49	.103	.39	.19	.46	.16	.37									
3. \$3.00 - \$3.99	28	.961	1.62	8.53	.97	.16	.16	2.07	1.32	.61	.16	.68	.33	.51									
4. \$4.00 or more	32	.988	1.92	9.63	1.30	1.04	.22	2.72	1.65	.76	.35	.97	.75	.59	.59	.59	.29						
Type of Farm																							
5. Potato	30	.998	1.77	9.78	1.01	1.02	.16	2.39	1.56	.66	.22	.68	.40	.46									
6. Mixed	22	.955	1.60	8.61	.95	1.00	.16	1.86	1.29	.52	.24	.62	.38	.44	.44	.44	.28						
Proportion of Food Home Produced																							
7. Less than 40 per cent	15	.964	1.40	6.94	.66	1.52	.16	2.36	1.67	.55	.24	.61	.25	.48									
8. 40 - 59 per cent	41	.975	1.66	8.96	1.07	.64	.15	1.99	1.39	.56	.25	.69	.28	.53	.53	.53	.21						
9. 60 per cent or more	27	.950	1.64	9.31	.94	.94	.13	2.02	1.25	.59	.14	.75	.59	.59	.59	.59	.26						
Number and Age of Children																							
10. None	28	1.044	1.80	9.19	1.23	.32	.18	2.35	1.65	.55	.19	.86	.58	.58									
11. 1 or 2 under 13	15	.944	1.74	8.94	1.12	1.67	.14	2.18	1.52	.61	.18	.72	.49	.48	.48								
12. More than 2 under 13	11	.844	1.52	8.92	.87	.52	.14	1.64	1.11	.46	.24	.60	.16	.50	.50	.50	.29						
13. More than 2, at least 1 in each age group	15	.953	1.40	8.44	.63	.24	.15	1.81	1.12	.57	.21	.62	.26	.48	.48	.48	.24						
Economic Level																							
14. Low	19	.897	1.38	7.64	.95	.12	.15	1.70	1.12	.44	.19	.59	.22	.47									
15. Medium	28	.979	1.53	8.26	.90	.64	.18	2.02	1.36	.63	.24	.77	.36	.55	.55	.55	.23						
16. High	22	.995	1.82	9.36	1.06	1.73	.14	2.31	1.58	.56	.20	.64	.36	.41	.41	.41	.24						

Table 22.— Average Weights Consumed of Certain Dairy Products per Person per Week and of Other Foods per Food-Cost Unit per Week, by Class of Household, Prince Edward Island Farm Households, 1945-46 — Continued

Class of Household	Pounds per £ Food-Cost Unit per Week									
	FATS and EGGS	OILS b/ Butter	SUGARS and Syrups /	JAM, JELLY, and Marmalade k/ Molasses	PULSES and Potatoes l/ Nuts m/ Pulses	OTHER Vegetables n/ Vegetables	Canned Vegetables o/ Vegetables	GRAIN PRODUCTS p/ Products	Flours q/ Flours	
1. Prince Edward Island	.90	.69	.57	1.17	.54	.69	.19	6.99	.23	.18
Value of Food per Food-Cost Unit per Week										
2. Less than \$3.00	.63	.55	.49	.98	.53	.56	.10	6.17	.20	.17
3. \$3.00 - \$3.99	.90	.67	.56	1.20	.52	.79	.19	7.12	.19	.14
4. \$4.00 or more	1.22	.87	.64	1.37	.58	.75	.29	7.99	.31	.24
Type of Farm										
5. Potato	1.01	.72	.55	1.15	.55	.62	.20	7.30	.22	.16
Mixed	.86	.66	.54	1.19	.51	.78	.19	6.56	.25	.20
6.										
Proportion of Food Home Produced p/										
7. Less than 40 per cent	.77	.70	.52	1.31	.56	.80	.16	6.35	.25	.15
8. 40 - 59 per cent	.99	.70	.57	1.14	.54	.63	.20	7.04	.22	.16
9. 60 per cent or more	.86	.66	.59	1.08	.51	.66	.18	7.30	.20	.18
Number and Age of Children q/										
10. None	.87	.71	.60	1.12	.50	.60	.24	6.59	.17	.13
11. 1 or 2 under 13	1.02	.79	.68	1.08	.56	.53	.17	6.54	.24	.21
12. More than 2 under 13	.78	.66	.56	1.24	.61	.72	.19	7.12	.26	.21
13. More than 2, at least 1 in each age group L/	.92	.65	.51	1.19	.53	.89	.12	7.18	.24	.18
Economic Level										
14. Low	.83	.68	.54	1.15	.57	.69	.14	7.10	.25	.19
15. Medium	.82	.69	.58	1.21	.55	.77	.18	7.20	.22	.17
16. High	1.09	.69	.56	1.14	.53	.61	.22	6.67	.24	.19

Table 22.— Average ^a Weights Consumed of Certain Dairy Products per Person per Week and of Other Foods per Food-Cost Unit per Week, by Class of Household, Prince Edward Island Farm Households, 1945-46—Continued

Class of Household	Type of Farm	Number and Age of Children ^g	Economic Level	Pounds per Food-Cost Unit per Week			
				Cereals		FRUIT	
				Bread	Cooked	Whole and ^h	OTHER
1. Prince Edward Island	.22	.51	.14	.23	.42	.134	.58
Value of Food per Food-Cost Unit per Week							
2. Less than \$3.00	.10	.37	.09	.15	.31	.76	.27
3. \$3.00 - \$3.99	.23	.54	.15	.23	.46	1.45	.68
4. \$4.00 or more	.37	.65	.18	.31	.52	1.87	.80
Type of Farm							
5. Potato	.26	.53	.12	.20	.45	1.29	.50
Mixed	.08	.54	.13	.27	.40	1.44	.72
Proportion of Food Home Produced ⁱ							
7. Less than 40 per cent	.29	.54	.13	.24	.43	1.16	.49
8. 40 - 59 per cent	.26	.52	.16	.23	.45	1.40	.58
9. 60 per cent or more	.13	.45	.12	.22	.35	1.31	.63
Number and Age of Children ^g							
10. None	.35	.46	.15	.18	.43	1.28	.54
11. 1 or 2 under 13	.13	.56	.14	.22	.48	1.34	.65
12. More than 2 under 13	.03	.45	.16	.21	.40	1.16	.37
13. More than 2, at least 1 in each age group ^j	.34	.44	.12	.22	.34	1.39	.71
Economic Level							
14. Low	.05	.55	.13	.21	.47	1.15	.39
15. Medium	.17	.40	.15	.18	.37	1.45	.74
16. High	.30	.64	.14	.28	.50	1.39	.54
^a Seasonal consumption rates weighted as follows: fall, .4; winter-spring, .5; summer, .3.							
^b Retail weight except where otherwise stated.							
^c Food cost equivalent of a moderately active man.							
^d Milk solids.							
^e Carcass weight. Edible weight of offal included in "meats".							
^f Carcass weight of pork with head off. Very fat salt pork excluded.							
^g Edible weight.							
^h Fresh filler weight of fish.							
ⁱ Retail weight dressed, not drawn.							
^j Fat content.							
^k Very fat salt pork included.							
^l Sugar content.							

^a Retail weight. Sugar content included in "Sugars and Syrups".
^b Fresh equivalent weight of fruit content included in appropriate class of fruit.

^c Shelled weight of nuts.

^d Fresh equivalent weight.

^e Including pickeled beets.

^f Including flour in purchased bakery products.

^g Included in "Cereals, To Cook" and "Cereals, Prepared".
^h "Refined" defined as containing less than 0.4 mg. thiamine per 1,000 calories.

ⁱ "Whole grain" defined as containing at least 0.4 mg. thiamine per 1,000 calories.

^j In terms of retail value.

^k Eighteen years of age or under.
^l (1) Under 13 years of age or over.



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